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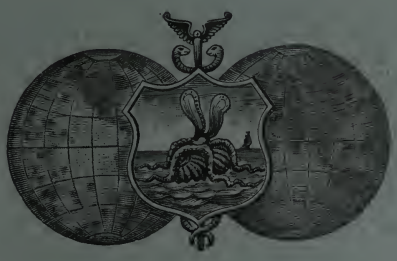

LEADING ARTICLES: "Artificial Feeding of Infants." "Eczema." "Infantile Scorbutus," "Malaria and the Santiago Expedition: a Warning."

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Cyclopædia of the Year's Literature.

ARTIFICIAL FEEDING OF INFANTS.

Kerley[1] finds that analysis of a condensed-milk mixture, when diluted for use in the proportion of 1 part in 6 of water, gives 1 per cent. of fat, 1.2 per cent. of proteids, and 8 per cent. of sugar, a greater part of which is cane-sugar. It is extremely rare, however, to find a

[1] Medical News, vol. lxx, No. 23, '97.

child who can take so rich a mixture without producing colic and indigestion. Most cases receive a 1-to-12 or 1-to-14 mixture. The 1-to-12 dilution gives a mixture containing 0.5 per cent. of fat, 0.6 per cent. of proteids, and 4 per cent. of sugar: a very inadequate combination. Apparent as the shortcomings are, many children will do comparatively well in early life on the weaker dilutions. Many thrive on the 1-to-12 till the third month, and then the demand for the system exceeds the supply of fat and proteids. Of the many hundred marasmic and rachitic infants observed, the author believes that fully 95 per cent. had been fed on the meal-foods or on condensed milk, chiefly the latter. In order to make up the deficiency of fats and proteids in condensed milk, cream may be added in proportion to make up the deficient fat. Among dispensary patients codliver-oil supplies the deficiency, the dose varying with the age of the baby, the ability to digest it, and the season of the year. Ten drops to a dessertspoonful, three or four times daily after feeding, are taken. During very hot weather the dose must be reduced or suspended if there are evidences of gastro-intestinal disturbance.

The low proportion of proteids may be increased by adding a meat-broth. One pound of lean beef is boiled in 1 quart of water till the liquid is reduced to 1 pint. Such a broth contains 0.8 per cent. of proteids; so that if 1 part of condensed milk is added to 12 of broth the mixture will contain 0.5 per cent. of fat, 1.4 per cent. of proteids, and 4 per cent. of sugar. This will answer for a child 3 months old, fat being supplied by codliver-oil. When the sixth month is reached 1 part of condensed milk may be added to 9 of broth. The percentages then will be, approximately, 0.75 per cent. of fat, 1.7 per cent. of proteids, and 5 per cent. of sugar. This, with codliver-oil, will answer until the eighth or ninth month, when barley- and oatmeal-gruel, with other meal-mixtures, may be allowed.

In an editorial[2] a writer remarks that no careful observer of large experience advocates the use of condensed milk alone, because children do not thrive on it. Holt, with his immense experience, states that he has as yet never seen a child reared exclusively on condensed milk who did not show, on careful examination, more or less evidence of rickets. Rotch is also equally positive in his statements. According to the writer, the number of children over four months of age who are fed exclusively on condensed milk are "an ill-conditioned class of children, with their starved muscular and nervous systems and catarrhal tendencies, who fall an easy prey to bronchopneumonia in the winter, to the gastro-intestinal diseases in the summer, and to the infectious diseases during the entire year." The chief objection to condensed milk as an infant-food is the fact that it contains a slight deficiency of proteids and an excessive and almost fatal deficiency of fat. Condensed milk cannot be changed or fortified so as to render it a desirable food; it may be made permissible, for in many cases it is the only available food, and in some cases the most desirable that can be obtained; nevertheless, its use is not to be advised when a better food can be procured. Sometimes the practitioner is obliged to use it among the extreme poor. One advantage in the use of condensed milk is the fact that the child is less likely to be fed with an overstrong mixture than when fresh milk is used.

[2] Archives of Pediatrics, Aug., '97.

One of the most frequent and serious errors in infant-feeding is overfeeding.

L. Emmett Holt[3] says that there are few subjects in pediatrics upon which such unanimity of opinion exists as that fresh cows' milk is the best artificial infant-food, and that to depend upon anything else as a permanent food is to hazard the child's life.

During the past five or six years the author has been in the habit of examining critically all children with reference to the effects of the prolonged use of various forms of diet, and also has yet to see an infant reared solely on canned condensed milk who did not exhibit signs of rickets to a greater or less degree, though a few would have passed, at first glance, as particularly-healthy specimens. The feeble resistance of condensed-milk babies to acute disease has long been noted by observers.

The objection to commercial foods which require the addition of fresh cows' milk is not so serious. Some of these foods, consisting largely of soluble carbohydrates, may supply the additional amount needed by cows' milk when used for an infant-food. But that they do more is not true. Foods of this class are successful because of the fresh cows' milk which is used in their preparation.

The addition of digestive ferments to milk, with the purpose of assisting the infant by a partial predigestion of the casein, is at times extremely useful. It should not be continued indefinitely, or the stomach will not acquire the capacity of doing this work.

No artificially-fed infant can safely be kept upon any permanent diet which does not contain fresh cows' milk. Cows' milk differs from breast-milk both in its chemical composition and in the bacteria which it always and everywhere contains. Whether the difference in chemical composition or the presence of bacteria is the more important is still a matter of discussion. In Germany the latter opinion seems to prevail, and consequently the great majority of German writers still advocate sterilization at a high temperature (212° F.). In this country, on the contrary, high-temperature sterilization as a routine practice is now advocated by very few, heating at a low temperature (155° to 170° F.), *i.e.*, pasteurization, being regarded as quite sufficient for all ordinary purposes; even this is thought, by very many, quite unnecessary where the production and handling of milk can be properly guarded, except in very hot weather. The value of milk-sterilization consists in improving its keeping qualities and in the destruction of pathogenic germs, but with milk which is fresh and as free from bacteria as has been shown to be practically possible, sterilization is unnecessary.

Henry Dwight Chapin[4] states that in the study of the subject of infant-feeding there has been very little improvement over the old Meigs mixture. He advised the people to get a good dairy-milk, and, as soon as it was delivered in the morning, allow it to stand in a cool place for two or three hours, and use the top half only for feeding the baby; it was then diluted one-half with water or whatever diluent was selected. He found on having this analyzed that one gained about 2 per cent. of fat. The advantage of this was that the fat was in a fairly fine emulsion that *had not been manipulated.* In the whole subject of laboratory-work that point seems to have been lost sight of largely, and yet it is an exceedingly-important one to consider. It is not the

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[3] Pediatrics, Nov., '97.

[4] N. Y. Med. Jour., Apr. 23, '98.

amount of fat put into the baby's stomach, but the way it is put and how it can be absorbed. The milk is manipulated too much in the laboratories. One obtains by this method 3 or 4 per cent. of fat, but the fat is not in a fine emulsion, and clinically the fat, in order to be thoroughly assimilated, must be in a fine emulsion. With reference to the diluent, in many cases the cereals were favored. Many babies, not assimilating the casein, will improve by using a thin barley-water that has been malted.

Henry Koplik[5] says that for home-modification of milk, Soxhlet, of Munich, had devised a formula which proved of value in most cases. This can be made by diluting the milk coming from a very good dairy, $^1/_2$ with water, for a child below nine months, and adding to each 8 ounces a teaspoonful of sugar of milk, dissolving the sugar of milk first in the 4 ounces of water, and then adding the 4 ounces of milk. Below three months, the children should be given 3 ounces in each bottle, and 8 bottles in 24 hours.

L. Duncan Bulkley[6] admits that countless lives have been lost through the use of proprietary foods. When mother's milk is not obtainable, cows' or other animals' milk is the next best food; there are, however, certain indications when the giving of wheat-products is indicated, as in those whose nutrition is at fault, as in a bad recurrent eczema.

A certain quantity of ordinary coarse wheat-grits is taken and placed in a pint of cold water in a china receptacle. This is placed on the fire in the evening and allowed to cook for two hours, when it is set aside, covered, and allowed to stand all night. In the morning it will be found to be jellified. Water is now added and it is again placed on the fire for two hours more, when it is turned out upon a sieve and rubbed through until the soft portions are made to pass through, leaving behind the hard coating of the wheat in the sieve. This product should be prepared fresh every day. For young infants, about 1 drachm should be administered and the quantity increased with the age and weight of the infant. The reasons why this is a food suitable for infants are simple ones: all the soluble elements are extracted, including the starches and phosphates, and the indigestible matter is left behind in the sieve. There is, too, an advantage in the slow process of preparation, covering about fifteen hours, which results in the partial digestion of the mass.

The advantages are as follow: The whole wheat represents the nearest approach to complete food after milk It provides a soluble, partially-digested, and thoroughly-cooked material. If prepared right it is uniform. It is a cheap food, and easily prepared by the poor. The whole wheat should be employed.

George Carpenter[7] remarks that the natural food of an infant is, of course, the mother's milk, and all healthy mothers should feed their infants from the breast. But just as it is so desirable that a healthy mother should nurse her offspring, so it is most undesirable that a mother suffering from serious organic disease should attempt to perform that function, phthisis and any tuberculous affection of the mammary glands being a contra-indication. Those in whom there is a strong family history of insanity had better not nurse their children.

If the child be too weak and puny to take the breast, then it will be necessary

[5] N. Y. Med. Jour., Apr. 23, '98.
[6] Med. Review of Reviews, June 25, '98.
[7] Edinburgh Med. Jour., July, '98.

to feed it at frequent intervals by teaspoonfuls, either using a sterilized mixture of cream and whey or a peptonized humanized cows' milk, or a modification of Gaertner's milk. Cream-and-whey mixture is prepared as follows:—

℞ Ordinary cream (20 per cent.), 1 ounce.
Whey, 2 ounces.
Sugar of milk, 1 drachm.

This should be sterilized for half an hour.

The whey is prepared by adding Fairchild's essence of pepsin to fresh milk, which is to be gently warmed. When the milk is set, break up the curd quite small, allow it to settle, and then carefully strain it through several folds of muslin, finally squeezing the contained curd so as to extract all the moisture. In the event of a mother being unable to nurse her infant, and in the absence of a wet-nurse, there is but one answer to the question of what artificial food can be recommended, and that is "cows' milk."

Cows' milk differs enormously in composition according to the health of the animal, the time it has been in milk, and the quality of the food; hence the advisability of taking the milk from a mixed herd of cattle rather than from one cow. Milk, as soon as it is received at the house, should be placed in a clean vessel, filtered through absorbent cotton-wool to remove gross impurities, and then sterilized to free it from the various germs with which it is contaminated. In the poorer neighborhoods we frequently have to rely upon an unsterilized cows' milk, suitably diluted with water, so as to reduce the quantity of the proteids. A mixture of 1 part milk and 2 parts sugar-water, the latter of which is made by adding 1 ounce of milk-sugar to a pint of water, approaches human milk in composition, but it is deficient in fat. The deficiency in fat can be remedied by adding 1 drachm of 20-per-cent. cream to every ounce of the milk mixture, and failing this $^1/_5$ of the quantity of cream, in the shape of cod-liver-oil, should be given to the child. This mixture should be boiled for half an hour, and when it is cool a $^1/_{20}$ part of lime-water added to it makes the fluid slightly alkaline. Ordinary sugar may be used instead of milk-sugar, if the proper proportion is observed. In private practice Rotch's cream mixture will be found reliable and very satisfactory. It is a near approach to human milk in chemical composition. For its preparation the ingredients are to be mixed, as soon as they are received from the dairyman, in the following proportions:—

℞ Cream (20 per cent.), $1\ ^1/_2$ ounces.
Milk, 1 ounce.
Water, 5 ounces.
Lime-water (to be added after sterilization), $^1/_2$ ounce.
Milk-sugar, $3\ ^3/_8$ drachms.

It has been the custom in cases of summer diarrhœa to withhold all milk and feed temporarily on albumin-water, but Rotch, who was the pioneer of the Walker-Gordon milk establishments of the leading American cities, has found that if the fat is reduced to 1.5 per cent., the proteids to 0.25 to 0.75 per cent., and the sugar to 4 or 5 per cent., the milk agrees very well. For prematurely-born infants the Gaertner milk can readily be adapted to their digestive capacities by reducing the proteids to 0.5 per cent., or perhaps a trifle less.

The Gaertner milk is not sterilized to last indefinitely—it should not be kept for a long time. Full sterilization makes the milk brown from caramelization of the sugar; and changes take place in

the fat and sugar which make them indigestible. Further sterilization does not destroy germs with absolute certainty, any bacteria that may be left are not necessarily harmless, and proliferating bacteria cannot always be recognized by signs of decomposition. Therefore, sterilized milk should not be kept for too long a period. Sterilization appears to rob milk of its antiscorbutic properties; therefore infants who are being fed upon it require careful watching, and any suspicion of the advent of scurvy must be combated by the ingestion of orange-juice. The Walker-Gordon laboratories do not sterilize their milk unless compelled, the distances to be traveled determining this. They rely on ice for its preservation for twenty-four hours.

Barley-water, oatmeal-water, or rice-water, added to milk, have nutrient worth, and cause the curd to split up into finer particles, and thus render it more easy of digestion. If eczema is induced by the use of these, gelatin-jelly may be substituted. Barley-water may be added to Rotch's cream mixture, instead of plain water, if necessary, prepared as follows: Two teaspoonfuls of Robinson's patent barley is placed in a clean jug, a pint of boiling water is then poured on it; it is stood by the fire for an hour, stirred frequently, and a pinch of salt added.

The same quantity of oatmeal or ground rice can be used in place of the barley. These waters should be sterilized with the milk in which they are added. As a temporary measure, peptonization of milk is beneficial. It should be reserved for those cases where there is troublesome sickness or diarrhœa or the digestive powers are very weak, and then only to tide the infant over its illness. If it is persisted in, the infant's gastro-intestinal glands will not develop properly, and the seeds of dyspepsia in after-life may be sown in infancy.

At the commencement of the seventh month, if the infant is still thriving, the modified cows' milk which has been found suited to it should be still continued, the child taking from 35 to 40 ounces in the twenty-four hours, and there need be no change of diet until it is 10 or 12 months old. It should be fed every three hours, the average amount at each feeding being 8 ounces. The digestive powers are now quite able to deal with well-cooked starchy foods, if not given in too great abundance.

Henri de Rothschild[8] has recently given to the world an exhaustive treatise, in which he claims that the feeding question is at the root of the great mortality of infants; but of almost equal importance to the health of the child is the receptacle from which it takes its nourishment, viz.: the nursing-bottle. A bottle furnished with a long rubber tube has been justly condemned, as it is an impossibility to keep the tube clean; and, therefore, the child draws impurities into the mouth, which, on account of its warmth and moisture, is one of the most prolific parts of the human anatomy for the propagation of every species of microbe.

DYSPEPSIA.

Etiology.—Rosenheim[9] states that in nervous dyspepsia there is increased irritability of the stomach nerves. Whether or not this increased irritability is really due to a mild inflammatory process in the mucous membrane is difficult to determine. In the neurasthenic a slight degree of inflammation not recognizable by our present methods could produce

[8] Med. Times, July, '98.

[9] Berliner klin. Woch., Nov. 1, '97.

morbid manifestations in the form of a dyspepsia which only an advanced gastritis would otherwise call forth. The fact that many dyspeptics are improved by dieting and other measures of value in gastritis favors this view. The neurasthenic develops under slight provocation mild inflammatory changes in the digestive organs, and especially in the stomach. Nervous dyspepsia is a disease by itself and chiefly a sensory neurosis; the motor and secretory functions of the stomach may also be impaired in it; it mostly exists along with other nervous manifestations, but it is wrong to assume that it is a symptom of neurasthenia; and the symptomatic treatment of the stomach symptoms is of great value in nervous dyspepsia; but treatment directed to the general condition and to the cause is even of greater importance.

According to Robin,[10] occasionally digestive troubles are latent. The following case is cited as a good example: The patient, a man 75 years old, had always had good health. He entered the hospital to be treated for psoriasis. His general health was very good at the time, and he did not complain of digestive troubles. In order to test the man's condition, a meal was prepared, and the analysis of the gastric juice did not reveal hydrochloric acid, free or combined, organic acids, propeptones, or peptones, but only a rather large quantity of mucin. Repeated examination gave the same result. The stomach had ceased to exercise its functions, and if the digestive functions did not appear to be suppressed, it was because the intestine had completely taken the place of the stomach. If the stomach is not indispensable, it must be concluded from that that latent dyspepsia is without inconveniences. If the intestine, under an influence of even slight importance, becomes disturbed in its functions, symptoms of dyspepsia appear and become predominant.

Overfeeding in infants, remarks Dessau,[11] and to a partial extent in older children, is the great source and origin of the chronic indigestion of childhood. Be the character of the food, however, the most suitable, even under mothers' milk, unless the influence of the common evil of overfeeding be recognized and prevented, sooner or later infantile digestion will be deranged and its clinical features will be chronic in form and intestinal in anatomical location. The offspring of gouty parents are very likely to manifest the neurotic constitution; also those children descended from a long line of neurotic ancestors who may have had gout. In these children the character of the food, as well as the quantity and method of preparation, may be regarded as having an important bearing in the causation and development of chronic intestinal indigestion.

In infants and children an increased flow of mucous secretion, which normally is greater and contains a larger proportion of mucin than in adults, is more easily produced. This is due to certain histological laws which provide the connective tissues with an increased amount of mucin for the nourishment of basement-membrane cells. Hence an excessive secretion of mucus rich in mucin will be produced in the intestinal canal from the action of even slight irritants. The bacilli that are always present in the intestinal canal have a most excellent medium in the profuse mucous secretion, so rich in mucin, in which to thrive to the highest degree, and it is

[10] Progrès Méd., Mar. 19, '98.

[11] Pediatrics, May 1, '98.

reasonable to believe that this favorable condition for their growth allows them to acquire a certain amount of virulence. Granting this conception of the pathogenesis of chronic intestinal indigestion to be true, it can scarcely be denied that sufficient toxins or toxalbumins are produced in the intestinal canal which, becoming absorbed, give rise to a group of symptoms which we recognize as an intoxication of autoinfection.

Treatment.—Taka-diastase in doses of from 3 to 5 grains, according to William Armstrong,[12] has been given with or immediately after meals, in amylaceous dyspepsia and the form of gout which seems to be caused by that defect, with excellent results. Flatulence and acidity are greatly diminished, there is much less strain put upon the comparatively weak intestinal digestive processes, and the gouty symptoms are much relieved.

James Taylor[13] remarks that in cases of amylaceous dyspepsia in which excessive fermentation of the products of starchy proteolysis is occurring in the small intestine, it is obvious that to eliminate carbohydrates from the food and to strictly limit the diet of the patient to purely albuminous substances for about a fortnight would bring relief. In doing so, however, the importance of starch as an article of diet is overlooked. In addition, such albuminous diet is irksome and monotonous, and the patient loses weight. It would be better to lessen the quantity of amylaceous substances than to forbid the use of them altogether. The principal seat of trouble being in the intestine, and the use of antiseptics being attended with no advantage, some method of digesting amylaceous substances in the stomach should be sought for, so that they may be absorbed by that organ and little or none reach the intestine, and can only be carried out effectually by means of a powerful diastatic ferment. Many malt-extracts contain much saccharin matter. This is mostly in the form of grape-sugar, which, when eaten in large quantities, tends to undergo fermentation in the stomach. If a quantity of predigested food is ingested, there arises the risk that it will be rapidly absorbed into the blood and be rapidly excreted without having imparted any of its nutritive qualities to the tissues. In addition, too rapid absorption into the blood not only disturbs the equilibrium of that fluid, but also produces disturbance in the liver functions. This explains the reason of the biliousness produced in some persons by the use of malt-extracts. Taka-diastase gives the best results in these cases. The dose is 2 $^1/_2$ grains in tablet or powder, to be given at the beginning of a meal. The starchy elements of the food should be properly cooked, for diastase cannot act on the starch-granule unless the cellulose investment has been ruptured by the process of cooking. Fluids used at meal-times should not be sipped with the meal, the rule being to eat first and drink afterward. Tea should be weak and used sparingly, and should, like other fluids, be taken after meals.

In answer to the question of the treatment of dyspeptics Einhorn[14] says that medicaments are not of much value, the main factor lying in proper nourishment. First, it is of importance to increase the quantity of nourishment; second, to provide a sufficient variety of foods. In order to improve nutrition, two articles of food, bread and butter, play an important part. Bread, besides having nutritive value, serves the purpose of in-

[12] Liverpool Medico-Chir. Jour., Jan., '97.
[13] Lancet, Aug. 7, '97.
[14] Public Health Journal, Mar., '98.

creasing the flow of saliva during mastication. Butter not only improves the taste of various kinds of foods, but is also in itself a nutriment of the greatest importance. The change to coarser varieties of food should be accomplished gradually. At first, milk, gruels, and thickened soups, eggs beaten up in milk may be given, later can be added zwieback or crackers with butter, then meat, the white of chicken, and well-scraped beef; next, mashed potatoes; and still later wheaten bread, baked or boiled potatoes, soft-boiled or scrambled eggs, and oysters; at last vegetables and fruits. An essential point is punctuality in the taking of meals. In most cases, in which a gain in weight is of great importance, frequent meals (five or six daily) will be advisable.

[The most interesting feature of the above is that pertaining to the influence of bread on digestion. Europeans eat much more bread during their meals than Americans; hence the much greater prevalence of dyspepsia among the latter, through insufficient salivary secretion. Ed.]

Verhaegen[15] observes that drugs have singularly lost their importance. Bitters —such as condurango, calumba, quinine, or nux vomica—may be given from a quarter- to a half- hour before meals; they should be discontinued when the appetite has returned. Hydrochloric acid in dilute solution may be taken a half-hour after meals. Pepsin is superfluous; the stomach secretes sufficient. Washing out the stomach with warm water every day, or every second or third day, according to the case, is of the greatest service.

ECZEMA.

Symptoms.—L. Duncan Bulkley states, in a recent analysis[16] of 10,000 miscellaneous skin cases in the writer's private practice, that 32.01 per cent. suffered with eczema. Neurotic eczema is frequently observed in infancy in connection with cutting of the teeth; in childhood it is less common; its most frequent time of occurrence is between 20 and 55 years of age. Various forms or phases of nerve-disturbance are seen in connection with neurotic eczema, and they may be considered under the following heads: (1) neurasthenia, or nerve-exhaustion; (2) nervous and mental shock; (3) reflex phenomena: (*a*) of internal origin, and (*b*) peripheral; (4) neuroses: (*a*) structural and (*b*) functional.

The eruption is apt to come first upon the hands and face, less commonly on the feet. But from its starting-point it may extend over large surfaces. Neurotic eczema upon the hands is very apt to exhibit vesicles, but on the adult face the eruption is quite as likely to assume and maintain the erythematous form, with vesicles, and often without moisture, unless scratched. The groups of lesions have a tendency to be pretty sharply defined, in more or less herpetic patches, which may present mainly solid papules or, when torn, a raw surface. It is intensely itchy, and the spasms of itching are sometimes fearful and utterly uncontrollable.

According to Jamison,[17] there is a remarkably-obstinate form of chronic eczema, which attacks the palms, and, though more rarely, the soles sometimes also. The disease commonly takes its origin in the centre of one palm, though it is generally not long until both are implicated. There are hard scaly patches of infiltrated skin, involving more or

[15] L'Œuvre Médico-Chir.; Lancet, Mar. 5, '98.

[16] Jour. Amer. Med. Assoc., April 16, '98.

[17] Edinburgh Med. Jour., Jan., '98.

less of the surface; there is ragged and uneven scaling, while in the natural lines of flexion, or independent of these, are deep and painful cracks. The hands feel hot, and burn and itch at times. This morbid condition advances sometimes along the fingers toward their tips, the pulp remaining, as a rule, immune. A symptom observed in the feet which is not so evident on the palms is the existence of a band of congestion beyond the scaly area, fading imperceptibly into the natural tint of sound skin. Though met with in both sexes, this variety of eczema is most commonly encountered in women, and in them about the menopause.

Etiology.—William H. Merrill[18] concludes, as the result of a series of experiments, that seborrhœic eczema is caused by a specific germ or germs, diplococci, whose life-history is most active at the ordinary temperature and with free access to the air, but which can develop at much higher and lower temperatures and with a scarcity of oxygen.

Audry[19] observed a case of so-called seborrhœic eczema occurring in a young man upon a cicatrix, the result of a burn in infancy. The occurrence upon a surface where the sebaceous and sudoriparous glands had been destroyed for years is strongly corroborative of the opinion held by the author, that the affection known as seborrhœic eczema is neither a seborrhœa nor an eczema. As the result of experiments made with this case, he concludes that so-called seborrhœic eczema is autoinoculable.

Treatment. — Nelson[20] offers a few general directions regarding the cleansing of eczematous surfaces and some approved methods for the removal of secondary products: Plain water or soap and water should be avoided, if possible. If the former has to be employed it should be as hot as can be borne, and the surface over which it has been used should be dried quickly and thoroughly and the selected dressing immediately applied. All detergent fluids should be warmed before use. Olive- or cotton-seed oil will cleanse almost as well as soap and water, and, if the part is carefully wiped, but little greasiness remains. Or thin, strained rice-milk cleanses well and is soothing to tender and acutely-inflamed surfaces. Before any line of local treatment can be begun all secondary products—crusts, scales, etc.—must be removed. This can be accomplished by saturating them with oil.

M. A. Brousse[21] has successfully used picric acid in the treatment of eczema. In cases of lichenoid eczema with a thick epidermis the acid was useless, but in acute oozing eczema accompanied by œdema of the skin it was very useful. Immediate relief is produced by the application of the picric-acid solution; the pain, heat, and itching disappear; the œdematous tumefaction is rapidly effaced, and the dressing, even when applied to the bare surface of the derma, is painless. The treatment is indicated in acute eczema; in the acute attacks of chronic eczema, particularly if there is a tendency to oozing and ulceration of the skin; and in the seborrhœic eczema (impetiginous) of infancy. It is contra-indicated in chronic eczema and generally in all those forms of eczema which are accompanied by a thickening of the epidermis (lichenoid eczema).

The method of employment is as follows: A saturated solution of picric

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[18] N. Y. Med. Jour., Mar. 6, '97.

[19] Annales de Dermat. et de Syphil., No. 5, '97.

[20] Mont. Med. Jour., April, '98.

[21] Nouveau Montpelier Médical, Sept., '97.

acid is painted on the affected parts, the application extending slightly beyond the limits of the eczematous area, then covered immediately with absorbent wool, or, it may be, with a compress soaked in the same solution, over which the wool is applied. This is allowed to remain on for about two days. The skin should be previously cleaned with some antiseptic, so that no suppurative organisms may be allowed to remain in contact with the diseased parts during the time they are covered with the woolen dressing. The staining due to picric acid may subsequently be removed by washing in a saturated solution of lithia carbonate.

Aubert[22] says that, generally speaking, picric acid is indicated in those forms of eczema in which the inflammation is acute and superficial and where the lesions are mostly epidermic. The keratoplastic action of the remedy cannot display itself in the chronic forms accompanied by induration of the skin and particularly by epidermic thickening; picric acid is incapable of modifying these chronic lichenoid eczemas. On the other hand, the keratogenic properties of the agent find an excellent field of action in acute eczemas with swelling of the integument, superficial ulceration, and weeping. Under its influence the inflammation rapidly subsides, and the acid forms (on contact with the ulcerated and oozing surfaces) a protective layer composed of coagulated proteid substances and of epithelial *débris,* under which healing takes place rapidly. Picric acid has the further advantage that it immediately stops itching; this effect is produced in chronic as well as acute forms of the disease. In acute eczema a cure is effected in from ten to fifteen days.

Jamieson[23] remarks that eczema of the scalp is most frequent in childhood, and in early infancy is a veritable calamity. The first appearances may attract little attention, and the outbreak is sometimes acute, with copious oozing and crusting over the head, even including the face. Or a circumscribed portion of the scalp becomes reddened and covered with a yellowish, fatty deposit. If this fatty deposit, a mixture of abnormally-cornified and therefore fattily-degenerated epidermic cells and sebaceous matter, is carefully removed daily with pure olive-oil and the entire area spread with 5-percent. borated vaselin, the complaint soon lessens, diminishes in extent, and in no long time is cured. But this is often aggravated by too frequent washing, and so an acute eczema arises. But from early childhood to puberty more severe examples occur. The whole head is covered with thick, yellow, dirty crusts; the hair is matted together, and a disgusting odor is exhaled. If the crusts are raised with difficulty, the underlying scalp is seen to be reddened and weeping. This condition is commonly occasioned by pediculi capitis, and their destruction is generally followed by speedy cure. Both in men and women of middle age hair-restorers and hair-dyes may cause an acute eczema. Treatment is eminently successful in these acute, weeping, impetiginous, crusted eczemas. Though it has been laid down that in such cases the hair must be cut, it is possible to cure without having recourse to a measure so disfiguring. The first item of cure is total discontinuance of washing with soap and water. The following ointment is rubbed in with a stiff brush thickly, night and morning, on all the eczematous parts, for several days, the previous layers being left undisturbed:—

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[22] Thèse de Paris, No. 34, '97.

[23] Berl. Klinik, August, '97.

℞ Hydrarg. sulphureti rubri, 1.0.
Sulphuris sublimati, 24.0.
Bergamott gutt., 25.0.
Vaselini flavi, ad 100.0.—O.M.

Only in the course of four or five days is an effort made to remove the ointment and crusts, primarily with a piece of flannel soaked in oil, subsequently by washing with lukewarm water and a non-irritating soap. Should the disease not be got rid of, the procedure is to be repeated. Even in the worst cases two or three courses suffice. The oozing will have ceased, the crusts have fallen off, and a diffusely-reddened surface remains, on which a slight desquamation is perceptible. This can be removed by a nightly inunction with olive-oil, or 5-per-cent. borated vaselin. When all inflammation has entirely subsided, and there is no tendency to the recurrence of oozing, the head may be washed, but must be often oiled to obviate relapses. Should pediculi be present, they must first be got rid of. This is most simply effected by using sublimate vinegar (hydrarg. perchlor., 1.0; aceti communis, 200.0).

Steinhardt[24] recommends the following to allay pruritus in eczema of the scalp:—

℞ Acidi salicyl., 6 grains.
Menthol, 12 grains.
Ol. lini,
Aq. calcis, of each, 1 ounce.
M. Sig.: For external use.

Jamieson[25] has adopted the following procedure in the treatment of palmar eczema: The hands (and feet) are enveloped in poultices made of starch-jelly, with which some boric acid has been incorporated, not merely sprinkled on, applied cold between two folds of cotton cloth. Each time the poultices are changed—once in four or six hours—the palms are briskly rubbed with a rough, though soft, dry cloth, and thus the soddened, unhealthy epidermis made gradually to peel off. Not too much is attempted at a time, but in course of four or five days to a week the palms will have become smooth, soft, pliable, and of a pinkish hue; cool, extensible, and free from itchiness. The poultices are now laid aside, and an ointment thus compounded rubbed in well but sparingly each day:—

℞ Acidi pyrogallici oxydati, 5 to 30 grains.
Lanolini, $^1/_2$ ounce.
Ol. amygdalæ,
Aq. destillatæ, of each, 2 drachms.
—M.

To this has, in some cases, been added 10 grains of salicylic acid. The ointment blackens the parts to which it is applied, but chiefly such as had been the seat of the parakeratosis. This returns for a time to a slight extent, but can be kept under by washing with a resorcin-and-salicylic soap, made with a superfatted basis, more or less friction being employed, according to circumstances. The effect of the oxidized-pyrogallic-acid ointment in restoring normal keratinization is remarkable, and, so far as the author's experience goes, it is permanent.

Davezac[26] finds that a small piece of buckskin placed between the ointment and the rest of the dressing greatly ameliorates the condition. Its good effects are ascribed to the flexibility of the buckskin, which allows it to be molded to every part of the surface; to the ease with which it can be cleansed; to the fact that it does not markedly absorb

[24] Amer. Pract. and News, Mar. 15, '98.
[25] Edinburgh Med. Jour., Jan, '98.
[26] Jour. de Méd. de Bordeaux, No. 51, '97.

the ointment used, and that therefore the part remains moist; and to the safety with which it can be removed, the newly-formed epidermis not being torn away.

Jacquet[27] employs superficial scarification of patches of eczema in certain selected cases. The patches are scarified in parallel lines, one to one and a half millimetres apart, in one direction only, by a very pointed instrument penetrating to the superficial layer of the dermis. These areas are then encouraged to bleed and bathed with boiled water, and then covered with tarlatan dipped in boiled water. On reaching home cold potato-starch cataplasms are applied until the next treatment: generally three or four days later. Before commencing the treatment the patches are prepared by the application of continuous, cold, plain starch poultices. Six to sixteen treatments suffice for a cure. A reaction is set up in the patches, but no scars result. This treatment is to be used only in special cases characterized by isolated discs in limited number.

Besnier's work, "Traité de Thérapeutique Appliquée," is summarized, as far as concerns the internal treatment of eczema, in La Belgique Méd., May 6, '97. He says that if pruritus is present an absolute milk diet must be ordered. No medicine should be given until the case has been under observation for some time, since there are few drugs which may not increase pruritus. The urine must be examined for uric acid, sugar, albumin, oxaluria, phosphaturia, and peptonuria, and the patient's organs and functions thoroughly overhauled. The most harmless cutaneous antispasmodics are asafœtida and musk in doses up to 30 grains, and valerian in various forms. Opium is generally contra-indicated, being itself a frequent cause of pruritus. For the insomnia, sulphonal or trional in doses up to 30 grains in twenty-four hours is much surer and generally well borne by the skin. Arsenic is useful in chronic cases, but does not suit acute cases or chronic during subacute exacerbations, with the exception of some varieties limited to the extremities or the head. In cases with a gouty diathesis bicarbonate of sodium acts well. The dose must be moderate if given for a long time. Sulphur in small doses is very useful, with young anæmic, "lymphatic," or tuberculous patients. It is contra-indicated in neurotic or cardiac cases, or when the eczema is recent and acute. It is best given as natural sulphur-waters.

Bulkley[28] says that the treatment includes both constitutional and local measures; the former are essential, the latter are helpful. Arsenic finds an important place in the treatment of neurotic eczema, but should seldom be administered in the form of Fowler's solution. Codeia seems to be the least injurious of the opium preparations in securing sleep. Phenacetin in full doses, repeated in an hour or so, will sometimes prove most effective. A large, warm drink at bed-time will often aid the remedies and may be valuable alone. The diet must always be carefully directed, and, for the purpose of furnishing best possible nerve-nutriment, an increase in the digestible fatty matter and phosphates should be ordered. Some caution may be required in regard to the former, but with a little care the amount of fat, of meats, and oils, and also fresh butter, can be added to the dietary. The phosphates are found abundantly in the preparations of whole wheat, such as crushed wheat, wheatena, wheatlets, wheat germs, Pettijohn's

[27] Bull. Gén. de Thérap., Jan., '98.

[28] Jour. Amer. Med. Assoc., Apr. 16, '98.

breakfast-food, etc., as also in bread made from the whole wheat-flour, some of which should be taken, if possible, three times daily. Milk, however, if properly taken, proves of the most signal advantage. It should be taken warm, pure, and alone, one hour before each meal, and also at bed-time, if sufficient time has elapsed for the stomach to be perfectly empty, which is at least four hours after a hearty meal. This precludes the possibility of adding liquor or egg to the milk, and especially should there never be a cracker or anything else eaten with or near it. The indications for local treatment differ materially in different cases. In the attempt to get relief from the itching, which can seldom be obtained by local measures alone, the plan of treatment should be a soothing and protective one. Zinc ointment with 1 or 2 per cent. of carbolic acid or creasote, or with 5 to 10 per cent. of ichthyol or tincture of camphor, is always a safe and generally beneficial dressing; but to be of service it should be kept thickly applied, spread on a lint in most places, and bound on firmly. In the acutely-inflamed and especially in the erythematous forms of the eruption, there is nothing better than the well-known calamine-and-zinc lotion, freely sopped on many times in the day. In the erythematous eczema of the face a tannin ointment, $^1/_2$ to 1 drachm to the 8 drachms, with 2 per cent. of carbolic acid, is effective. The use of very hot water for a brief application, followed by an appropriate ointment, should never be forgotten. In old cases of eczema of the scrotum the effect of this treatment is sometimes very remarkable.

Unna[29] recommends the following application for the treatment of eczema marginatum:—

℞ Mercury bichloride, 1 part.
Ichthyol, 20 parts.
Distilled water, 200 parts.

M. To be painted on night and morning, and then the part dusted with starch.

EXOPHTHALMIC GOITRE.

Symptoms.—H. Mackenzie[30] says that a slight œdema limited to the legs is not an infrequent accompaniment of exophthalmic goitre. This results from cardiac weakness, and is best met by the administration of cardiac tonics; a general œdema may be one of the main features of the early stage of the disease, and is not necessarily an unfavorable sign; general œdema may supervene before death. Swelling of the eyelids may be an early symptom, or it may come on after some years. Sometimes a non-pitting swelling is met with, affecting the lower extremities, resembling the swelling of myxœdema. This swelling is, however, unaffected by thyroid treatment.

Liégeois[31] remarks that there are but four varieties of œdema of the limbs in thyro-exophthalmic neurosis: Œdema of cardiac origin, dyscratic œdema, œdema coincident with albuminuria (this being independent of the well-known parenchymatous or glomerular lesions of the kidneys), and œdema of vasomotor origin. Œdema of cardiac origin may be paroxysmal. In well-established cases of œdema of the legs by asystole, when the impulse of the overtaxed heart is suddenly weakened and the tension of the radial pulse is suddenly lowered, digitalis excels; it is still more excellent when

[29] Centralb. für die gesammte Therap., Dec., '97.
[30] Edinburgh Med. Jour., 401-410, April, '97.
[31] Jour. des Practiciens, Aug. 7, '97.

the œdema follows definitive organic alterations of the muscle, of the cardiac valves, and of the aorta; apart from that, it should be banished from the treatment of exophthalmic goitre.

By "dyscratic œdema of the limbs in exophthalmic goitre" the author means that which is coincident in many cases of the disease with chlorosis, or with anæmia engendered by chronic metritis, with leucorrhœa, amenorrhœa, or dysmenorrhœa, or following pregnancy, nursing, or puerperal hæmorrhages; in the two sexes, following sexual abuse, diarrhœa, or protracted illnesses, or privations. In the form of exophthalmic goitre due to these causes, in which the pulse does not usually exceed 100 or 110, and the pulsatile goitre and the protrusion of the eyes are but moderately developed, in which the neurosis occurs, with symptoms of torpor, soft œdema of the feet and of the lower part of the legs is common after walking and riding, or it becomes established for several weeks in the legs without the presence of albumin in the urine or dilatation of the heart. Infusions of pure bitters, milk, rare meats, and raw meat should be recommended at first; if this is not sufficient, arsenic should be resorted to.

Œdema of the limbs is not observed whenever chemical analysis reveals the presence of albumin in the urine in exophthalmic goitre. It never exists when albumin, not very abundant, however, is not observed except during the digestive period. Whenever the author has observed œdema of the limbs in patients with exophthalmic goitre who excreted albuminous urine apart from the digestive periods, the patients had a cachectic appearance; the latter were emaciated, and the skin had a pale, waxy tint, indicating, probably, a lesion of the blood; the former had very bad gastric and intestinal digestion. None of them had parenchymatous nephritis or venous thrombosis of the limbs. Œdema is dyscratic, but amenable to treatment; in some cases tonics, particularly arsenic, in others antidyspeptics, are to be employed. Œdema is rarely of a purely vasomotor origin. In these cases hydrotherapy and galvanization alternating with faradization may be given.

In exophthalmic goitre, says A. Maude,[32] the two chief abnormal variations in movements of the eyelids are von Graefe's sign—the eyelid descending not synchronously with the descending globe, but more slowly and, it may be, more jerkily—and Stellwag's sign, consisting in retraction of lids and consequent increase in the width of the palpebral fissure. This retraction is most obvious in the upper lids and is frequently associated, as is seen when the patient's gaze is directed downward, with a cupping of the lower lid. Both of these signs are quite independent of exophthalmos, and their clinical value is difficult to estimate. They are neither constant nor pathognomonic, and are variable even in the same subject. Von Graefe ascribed the deranged movement to spasm of the fibres of Müller. More recently Ferri has advanced the theory that the retraction of the lid is the result of the mechanical shortening of the levator palpebræ due to the increased volume of blood-vessels distributed in its substance. Maude evidently leans to the theory that these states are due to an affection of the oculomotor nucleus and a consequent paresis of the upper facial group of muscles.

J. A. Spalding[33] reports a case in which, owing to excessive protrusion of

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[32] Edinburgh Med. Jour., July, '97.

[33] Amer. Jour. Med. Sciences, Feb., '98.

the globes, the enucleation of both eyes became successively necessary after they had been functionally destroyed by panophthalmitis. The patient was a man, aged 30 years, who first had blurring of sight in the right eye and paralysis of the right internus. Exophthalmos came on a few weeks later, and after that enlargement of the right thyroid and increased heart-action. The protrusion of the eye increased until the lids could not be closed over it, and inflammation of the cornea and deeper structures followed. After removal of the globe there remained enormous protrusion of the orbital tissues; a hard brawny tissue still continued to fill the orbit. A few months later the second eye became similarly affected, and was lost in the same way. The general condition of the patient improved and the thyroid swelling diminished under use of thyroid extract.

Hinshelwood[34] observed a case of exophthalmic goitre, with typical heart and thyroid symptoms, but with only a unilateral exophthalmos. This was the third case he had seen.

Etiology.—Valençon[35] considers neurotic heredity and emotional excitement the most important of the predisposing causes.

Riche[36] strives to show that exophthalmic goitre is only a peculiar form of the ordinary goitrous enlargement of the thyroid gland. It may be produced by excitation of the cervical sympathetic. Vigouroux, describing the technique of faradization for this disease, warns the operator against placing either of the electrodes on a point 1 centimetre behind and below the eyebrow, otherwise the eye symptoms will be increased. Riche assigns the primary cause of the special symptoms to the dilatation of the inferior thyroid artery, arising from the increased demand for blood to the gland; this dilatation brings the walls of the vessel in contact with the sympathetic nerve, and by its pulsations causes irritation. The first sign consists in tachycardia, exophthalmos following later.

Treatment.—Deguy[37] says that the most important symptomatic signs to be combated are the cardiac disturbances, which are usually manifested in symptoms of feebleness of this organ. In some of these cases digitalis is a valuable drug, in other cases it fails to do good. It is particularly indicated in those instances in which the heart is greatly disturbed in its rhythm and power. In these cases the digitalis should be given in small doses. The murmurs which are heard in the heart in many cases of exophthalmic goitre are not to be regarded as valvular affections, but as temporary symptoms of the disease. For the palpitations, cold compresses may be applied to the præcordium, or in their place atomization by ether or chloride of ethyl or the use of an ice-bag. In those instances where there is considerable cardiac pain or pseudo-angina, nitroglycerin is useful. Strychnine should not be administered. The best hypnotics for the insomnia are chloral and trional. Arsenic may be given for the general improvement of the patient's nutrition.

Bertran[38] obtained good results from the use of the constant galvanic current in the treatment of Basedow's disease. The exophthalmos diminished or disappeared, the general condition improved, and there was diminution of the disordered cardiac innervation and in the

[34] Edinburgh Med. Jour., May, '98.
[35] Gaz. des Hôpitaux, June 19, '97.
[36] Thèse de Paris, '97.
[37] Jour. des Pract., Oct. 16, '97.
[38] Arch. de Ginecologia, Obs. y Ped., No. 5, '98.

volume of the hypertrophied thyroid body.

Owen[39] mentions a patient affected for twenty years by Graves's disease, who was given thymus gland. The thymus disagreed with the digestion, and was discontinued on several other occasions; its discontinuance was always accompanied by a reappearance of the symptoms, its use followed by amelioration.

H. C. Wood[40] advocates the treatment of exophthalmic goitre by splenic extract.

George W. Crary[41] has had six or eight cases of exophthalmic goitre on thymus-gland extract for periods varying from a few months to two years or more. The improvements had not been constant, and the essential symptoms of the disease had not disappeared. Another of the ductless glands that had been used in the treatment of exophthalmic goitre was the extract of the suprarenal capsule. It was not a specific for the disease; but, in a case so treated, the patient improved much more under the extract of suprarenal gland than under the thymus extract. The great improvement in the muscular strength had been especially noticeable. The patient had ceased taking the suprarenal capsule for some time, and this had been followed by a rapid deterioration in her condition. Any quantity of the thymus gland can be administered to a patient without giving rise to any symptoms whatever, but it is very different with the extract of the suprarenal capsule, which is far from being inert. Patient begun with a small dose of the suprarenal extract, but had increased to 5-grain tablet prepared by Armour.

Solis-Cohen[42] treated successfully three cases of exophthalmic goitre with suprarenal extract. In all, the goitres have completely disappeared, tachycardia and other unpleasant symptoms have been absent for more than six months, while there is but a trace of exophthalmos remaining.

Schulz[43] reports fourteen cases of Basedow's disease under the care of Kummell which were treated by partial removal of the enlarged thyroid body. In most of these cases the symptoms of this disease were very severe. Twelve of these patients were completely cured and enabled to resume their occupations. In the two remaining cases the operation was followed by much improvement, and there is every probability of the exophthalmos, the sole persisting symptom of the disease, disappearing in a short time. Frequent observation of the patients after operation during intervals varying in the different cases from two to seven years have convinced the author that objections to partial strumectomy on the ground of probable relapse do not hold good. In one case only was there observed any renewed enlargement of the thyroid. In all the others the remaining portion of the gland showed a tendency to shrink rather than to increase in size.

Doyen[44] relates two cases in which ablation of the thyroid gland cured all the symptoms of exophthalmic goitre. When the patients were given thyroid extract, after the apparent cure, all the symptoms returned temporarily. He regards the removal of the gland as easy and devoid of danger, section of the sympathetic as useless and dangerous.

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[39] Gaz. Hebd. de Méd. et de Chirurgie, Jan. 3, '97.

[40] Amer. Jour. of the Med. Sciences, p. 511, May, '97.

[41] N. Y. Med. Jour., April 16, '98.

[42] Philadelphia Polyclinic, May 28, '98.

[43] Berliner Klin., June, '97.

[44] Semaine Méd., July 29, '97.

Péan[45] corroborates Doyen, pronouncing section of the sympathetic resultless and unnecessary, thyroidectomy as successful and safe, while the after-occurrence of myxœdema need not be feared, as, out of a large number operated on, only two or three developed this disease.

Edmunds[46] has found that if a portion of the thyroid gland be removed the vesicles of the remainder enlarge and become altered in shape from round or cubical to oblong or branched; that the lining membrane becomes convoluted and the lining secreting cells columnar instead of cubical, and that the colloid contents of the vesicles become less viscid and more watery. These changes appear to be identical with those found in the enlarged thyroid of Graves's disease; hence it may be inferred that the typical change in the enlarged thyroid in Graves's disease is of the nature of a compensating hypertrophy. Previous division of nerves has no effect upon these changes, and hence the enlarged thyroid of Graves's disease is not primarily of central origin. A number of experiments were performed upon dogs, with a view to further determining the function of the parathyroid glands. If a single parathyroid and a minute piece of thyroid proper were left, no symptoms of any kind appeared, whereas death followed if the parathyroid was subsequently excised, although the small piece of the thyroid proper was left. The excision of the parathyroids would thus appear to be the cause of the acute symptoms (tremors, rigidity, convulsive attacks of dyspnœa, and death) which follow the total excision of the thyroids, and that the excision of thyroid proper causes only the symptoms of myxœdema.

Jonnesco[47] advocates the bold step of operating in exophthalmic goitre by bilateral complete removal of the sympathetic ganglia in the neck. The operation itself he admits to be bold, to be difficult of performance, and in some cases, owing to the fusion of the lower cervical with the upper dorsal ganglia and to the close investiture of the trunk by important and intricate network of vessels, to be impossible. While some surgeons, after division of the sympathetic trunk on one side, have observed no pupillary or similar changes, others have; the author has usually found myosis, increased salivary and lacrymal secretion, ptosis, and flushing of the face; but these symptoms were very transitory, and so slight that, when the operation is bilateral, and when, thus, one has no standard with which to compare, they are quite invisible. He concludes that resection of even the whole of the cervical sympathetic trunk on both sides does not necessarily produce any evil result; this operation can always be tried; in exophthalmic goitre the operation is "absolutely indicated."

Marchant,[48] in operating upon a case of exophthalmic goitre according to the operative procedure indicated by Jonnesco, found the cervical sympathetic by an incision which extended from the point of the mastoid apophysis to the external third of the clavicle; this incision enabled the author to pass behind the sterno-mastoid and to displace forward and inward the vasculo-nervous bundle of the neck, after having cut and ligated the external jugular vein and some nervous fibres of the superficial cervical plexus. The sympathetic then appeared under the form of a rather thin white cord held by the prevertebral

[45] Bull. de l'Acad. de Méd., t. iii, p. 31, '97.
[46] Jour. Path. and Bacter., Jan., '98.
[47] Ann. d'Ocul., March, '97.
[48] Gaz. Hebdomadaire de Méd. et de Chir., July 4, '97.

aponeurosis against the longus coli muscle; this nerve, however, was not easily recognized, for it was not possible to be sure that it was the sympathetic nerve until the upper cervical ganglion was exposed; that is, the fusiform enlargement, which is absolutely characteristic. In order to avoid all hesitation and all disastrous cutting, a sharply prolonged incision toward the mastoid was made, which gave sufficient opening for exposing the ganglion. The operation on the left cervical sympathetic, which included resection of the lower part of the upper cervical ganglion with about four centimetres of the subjacent nervous trunk, lasted fifteen minutes; that on the right side lasted ten minutes, and the resection of the nerve was made in the same length of time. It was observed that the middle cervical ganglion was not appreciable on either side. There was no modification of the pupils at the time of the operation; there were observed only small subconjunctival bloody effusions, which were very apparent and existed in the external segment of the right ocular globe only; these effusions appeared at the time of operation. The two wounds were closed by buried deep sutures and superficial intradermic sutures which were designed to render the cicatrices less visible. The immediate results of this operation were perfect, although emotion and fatigue caused the reappearance of the exophthalmia, sometimes momentarily; it occurred, however, in a much less degree than before the operation. The author states that there is no longer any trace of the goitre, and that the general physical and mental condition has remained excellent.

Abadie[49] advances the theory that the malady is due to a permanent excitation of the vasodilators of the cervical sympathetic. Operative treatment directed toward the gland is followed by disastrous results; section of the sympathetic trunks between the upper and middle ganglia has recently caused the subsidence or disappearance both of the goitre and the exophthalmos. When these nerves are divided, the vasodilatation of the retrobulbar vessels, which causes the exophthalmos, diminishes, and that of the thyroid arteries causing the goitre is almost abolished. The greater influence exercised by the section of the sympathetic nerve below the superior ganglion upon the goitre, as compared with the exophthalmos and tachycardia, can be explained by the fact that all the fibres running to the superior thyroid artery, the most important factor in its causation, are supplied by the upper ganglia and are contained in the nerves below them. The other symptoms are often ameliorated; but the fact that they do not disappear *pari passu* with the goitre proves that they are not dependent upon it, corroborating the evidence yielded by their persistence after thyroid ablation.

Jaboulay[50] reports nine cases of section of the cervical sympathetic for exophthalmic goitre. The results were good, both with respect to the exophthalmos and to the goitre and palpitations. The best effect was obtained in young people in whom presumably the accelerator system of the heart was less developed and more thoroughly modified by the division of the sympathetic. In cases of failure of the treatment an explanation might be found in the existence of two sympathetic cords in the neck: a not infrequent anomaly.

Chauffaud and Quénu[51] report a patient who had marked exophthalmia and

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[49] Gaz. des Hôp., July, 8, '97.
[50] Progrès Méd., July 31, '97.
[51] La Presse Méd., July 3, '97.

an enlarged thyroid, with all the symptoms of Basedow's disease. She was operated on by Jaboulay's method, and both superior cervical ganglia of the sympathetic removed. The operation apparently had no influence upon the disease, the exophthalmos remaining practically just as marked, and no alteration being noted either in the size of the goitre or the pulse or respiration.

Faure[52] has excised the cervical sympathetic in three cases. He is of the opinion that it is a "good operation," only in future he purposes to use ether instead of chloroform, and to operate on the two sides of the neck at different times.

Lejars[53] thinks that any operative treatment of exophthalmic goitre is likely to be attended by serious and quite special risk.

Poncet[54] recommends division of the sympathetic should the actual goitre be small, and thyroidectomy only in urgent cases.

SCORBUTUS, INFANTILE.

Symptoms.—Infantile scorbutus, says Crandall,[55] occurs in every grade of life, but is more frequent among the rich than among the poor. It may appear at any period of infancy or early childhood, but is most common between the ninth and fourteenth months. The essential symptoms are divided into two groups. In the first, or primary, group are: pain on motion, painful swelling of the lower extremities, and spongy and bleeding gums. The secondary symptoms are: subcutaneous hæmorrhages, pseudoparalysis, and hæmorrhages from the cavities of the body. Pain on motion is a constant symptom; it develops early, and is frequently so intense as to cause the child to cry out at the slightest jar or motion. In the early stages it is frequently difficult to determine its exact seat. Painful swelling of the lower extremities is one of the most characteristic and constant symptoms; the upper extremities are rarely involved. The thigh is affected more frequently than any other region. The swelling is above and not at the knee-joint, as in rheumatism. The gums are purplish, soft, spongy, and bleeding, and frequently show decided ulcerations. When the teeth have not come through, changes in the gums are usually slight or entirely absent. Subcutaneous hæmorrhages as well as hæmorrhages from the cavities of the body are very common, but are not necessary to a diagnosis of scurvy. A varying degree of immobility of the extremities is also common and the condition is frequently so marked as to simulate paralysis. Fever is often present, and is usually intermittent in character. Diarrhœa is more frequent than constipation.

An interesting case is reported by Henry Ashby.[56] The patient was an infant aged 7 months. Healthy born, mother unable to nurse it; it was consequently given a proprietary food. The infant had thriven well, but for two or three weeks past had had a bad cough. The nurse noticed that the left eyeball was very prominent; this appears to have come on suddenly, and, while the right eyelid closed naturally, the left ball was, in part, exposed, as the eyelids, when closed, would not meet. The eyelids were not puffy, there were no ecchymoses either on the eyeball or elsewhere.

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[52] Rev. de Chir., No. 11, Suppl., '97.

[53] Bull. et Mém. de la Soc. de Chir. de Paris, March, '97.

[54] Bull. de l'Acad. de Méd., tome iii, p. 221, '97.

[55] Archives of Pediatrics, July, '97.

[56] Medical Chronicle, Sept., '97.

The ribs were beaded, but there was no tenderness about the limbs or bones. No teeth were cut; the gums were normal.

Under 3 teaspoonfuls of orange-juice daily and 30 ounces of fresh milk the little patient made a quick and satisfactory recovery, the eyeball gradually regaining its normal position.

There is no doubt that this was a case of infantile scurvy. An hæmorrhagic diathesis had been set up by improper feeding. The cough was the exciting cause of an effusion of blood taking place between the periosteum of the orbit and the bone, thus pushing the eye forward. Cases of scurvy with subperiosteal orbital hæmorrhage have been recorded before, but there were ecchymoses in other parts as well.

Diagnosis.—Crandall[57] says it may be mistaken for rheumatism, stomatitis, rickets, sarcoma, osteitis, and infantile paralysis. The result of antiscorbutic treatment is one of the most certain means of diagnosis.

According to Isaac Abt,[58] the earliest cases of infantile scurvy reported were erroneously described as cases of acute rachitis. With reference to the differential diagnosis, congenital syphilis could be excluded by the history and by the absence of syphilitic lesions on the skin and mucous membranes. In congenital syphilis there was never a history of severe pain. The pseudoparalysis of syphilis were limited nearly always to the upper extremities; the swelling was never so intense as in cases of infantile scurvy, and was more prone to occur on the epiphyses than on the diaphyses. Separation of the epiphyses occurred in both diseases.

Etiology.—Jacobus,[59] who states that scurvy is generally considered to be a disease of malnutrition, and customarily attributed to a lack of vegetables, thinks the latter cause is certainly doubtful in the case of children. Scurvy in infants most frequently occurs between the ages of 9 and 18 months, or about the time the mother's milk begins to fail and artificial foods are resorted to. In looking over the literature of scurvy, it is found that the disease in children, in nearly every instance, is reported to have occurred where the infants had been fed almost exclusively on some one of the following foods: Proprietary preserved foods, condensed milk, peptonized milk, sterilized milk, and even barley-water is mentioned as a cause. Northrup, according to Thompson, does not state it any too strongly when he says: "It is a significant fact that the country which furnishes most of the literature of scorbutus in children is the same which is posted from end to end with advertisements of proprietary foods."

J. H. Fruitnight[60] says that, in ten cases of infantile scurvy observed, in all but one the child had been fed on prepared foods. All men who do much work among children condemn the proprietary foods and agree that mother's milk is the best food. Cows' milk is next best. Pasteurized milk has saved many children, and it will be a retrograde step if discarded. Mere sterilization, however, is not sufficient; it must be *modified* to suit the cases.

According to the investigation, by the American Pediatric Society,[61] of 379 cases of infantile scurvy, the disease is most apt to develop between the ages of 7 and 14 months, inclusive, and has a greater tendency to occur among the

[57] Archives of Pediatrics, July, '97.
[58] Med. Rec., June 11, '98.
[59] Med. News, Jan. 15, '98.
[60] Med. News, Jan. 15, '98.
[61] Med. Rec., July 2, '98.

rich or the well-to-do. The most important etiological factor is a dietetic one, 214 of the cases (60 per cent.) having been fed on proprietary foods. There does not seem to be evidence that the association of rickets and scurvy is at all intimate. Very possibly the same defect in diet which produces the one produces the other also, but the rapid recovery under treatment which the scurvy underwent did not apply to the rickets. This seems to indicate only accidental association of the two diseases; certainly not on any causal relation between them.

Treatment.—The remedy, says Jacobus,[62] lies in raw milk or simple mixed foods. The substitution of cows' milk or of sterilized cows' milk for woman's milk as the *exclusive infant-food* is an error. In the absence of good human milk, one should get the purest rich cows' milk which can be obtained, carefully filter it as directed by Seibert; freely dilute and modify it, by the addition of water, cane-sugar, and barley, rice, or oatmeal, and lime-water, according to the necessities of each particular case, and a food is obtained which will be perfectly satisfactory. In addition, after the age of six months, there being no special contra-indication, other simple foods, such as baked potatoes, beef-juice, fresh fruit-juices, vegetables, crackers, etc., should be carefully given as extra diet. In selecting cows' milk as a portion of the diet we should be careful to exclude all milk from cows fed on beer-grains. The one-cow's milk, also, should not necessarily be used, unless its quality has been determined by analysis. When possible, milk should be excluded when the morning and evening milkings are mixed together. Dr. Jacobi extols high or extreme dilution of milk with water, and since adopting his advice in that respect the author's success in feeding cows' milk to children has correspondingly increased. Lime-water or bicarbonate of soda must be added to cows' milk to diminish the occasional excess of natural acidity, and for its effects in breaking up the casein into small, easily digestible flakes. It can be given in the proportion of 1 part of lime-water to 20 of milk, or 1 grain of soda to 1 ounce of milk. Finally, to again quote from Jacobi, who says: "I am pleased to state that Auerbach agrees with me on another subject. The sugar he adds to the milk-food of infants is not milk-sugar, but cane-sugar, of which he gives $1\,^1/_3$ drachms daily, and also, according to my old teaching, more during constipation."

Baruch[63] does not think that pasteurized sterilized milk produces scurvy. The great point in infant-feeding is to make cows' milk like mother's milk. The latter is superior because it is always *sterile* and is received in the child's mouth direct from the mother's nipple; therefore, cows' milk must be made sterile. Good milk should be obtained from cows which are kept in a clean stable, where every precaution is taken to keep the milk pure, and it should be sent to the laboratory to be made perfectly sterile before it is used. The grade of the milk is not of so much importance if only it be *sterile*.

Dessau[64] has come to the conclusion that the best food for infants, rich and poor, is a kind of pasteurized milk which anybody can prepare. In the first place, good, clean milk must be obtained. This should be diluted one-quarter with water (more or less if the child does not thrive),

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[62] Med. News, Jan. 15, '98.
[63] Med. News, Jan. 15, '98.
[64] Med. News, Jan. 15, '98.

a little cane-sugar and a pinch of salt added, and this mixture placed in a double boiler, allowing it to cook ten minutes after the water in the lower vessel has begun to boil.

Abt[65] says that brilliant results are obtained by providing a suitable diet, such as fresh cows' milk, or mother's milk, beef-, orange- or lemon-juice, fresh vegetables, mashed potatoes, etc. The child should be placed under the best possible hygienic conditions, good ventilation be provided, and under favorable conditions of weather the child should be out-of-doors. Codliver-oil is especially indicated upon recovering from the scorbutic condition.

WHOOPING-COUGH.

Etiology.—Weill, who in 1894 expressed the opinion that whooping-cough is contagious only during the premonitory catarrhal stage, has since put his opinion to the test.[66] On various occasions he permitted nearly 100 young children, who had not previously suffered from whooping-cough, to be associated in the same ward for twenty days or more with children suffering from the disease during the stage of whooping. In only one case was the disease contracted, and in this instance the patient from whom the infection was derived was in the very earliest period of the whooping stage. In three small epidemics Weill was able to satisfy himself that infection was contracted from children who had not yet begun to whoop. He concludes that infection ceases very soon after the characteristic whoops commence, and that in a family it is not the patient, who is already whooping, but his brothers and sisters, who have not previously had whooping-cough, who ought to be isolated.

During an epidemic of whooping-cough an examination of the sputum was made by Hensell and Czapleroski.[67] The investigators were unable to discover the diplococcus described by Ritter, but in each of the thirty cases which they examined they demonstrated the presence of a small bacillus in the sputum. It consists of small short rods, with rounded ends, which very readily stain with the aniline dyes, especially the ends of the rods. The organism is motionless, possesses little resistance, and appears to be quite free in the sputum uninclosed in cells. The smaller forms resemble cocci, while those preparing for division resemble diplococci. Pure cultures form a grayish-yellow film in serum-tubes and grow on gelatin at 23° C. Attempts at inoculation of animals were unsuccessful. The authors believe that they were justified in considering the organism the cause of whooping-cough, as, in some cases in which the diagnosis had not been arrived at, they prophesied attacks of whooping-cough from the presence of the organism in the sputum, and their predictions were verified later.

Treatment.—Roskam[68] since 1890 has treated 290 children suffering from whooping-cough by the method introduced by Moncorvo; namely, by applications of a 2- to 3-per-cent. solution of resorcin to the glottis with a fine sponge. Before the date mentioned he had used Moncorvo's method in its entirety; that is to say, before applying the resorcin he anæsthetized the glottis by the application of a 10-per-cent. solution of cocaine. Finding, however, that this was apt to cause severe spasm, he used

[65] Med. Rec., June 11, '98.
[66] Lyon Méd., May 9, '97.
[67] Deutsche med. Wochenschrift, Sept. 9, '97.
[68] Ann. de la Soc. Méd. Chir. de Liége, Feb., '97.

the resorcin without previous cocainization. In the 290 cases treated no other therapeutic measure was employed in order that the effects of the resorcin might be tested as fairly as possible. Children under 2 years of age seemed to get well more easily than older ones. Infants under 1 year were "in the immense majority of cases" cured in about a week from the first application of the resorcin. Roskam thinks it important to wait till the initial congestive stage is past and the "whoop" is fairly established before commencing the applications, as in that period they are apt to cause irritation. In children under 1 year a 2-per-cent. solution should be used; in those between 1 and 2, a 2-per-cent. and then a 3-per-cent.; from 2 years upward, a 3-per-cent. solution. The applications should be made every 4 hours, beginning at 6 A.M., and once or twice in the night. When the applications have been continued for ten or twelve days they should be suspended. Very often recovery takes place without further treatment; if not, after an interval of 5 or 6 days the applications may be resumed for some days. After a few applications by the practitioner the treatment is carried out by those in charge of the patient.

In pertussis, Moncorvo,[69] as a substitute for resorcin, now uses asaprol—a soluble derivative of betanaphthol—in the form of an aqueous solution of the strength of 1 to 100, applying it by means of a brush with a long, curved handle to the posterior pharyngal walls and about the region of the glottis every two hours in the day. In 26 cases ranging in age from 1 month to 9 years in which the remedy has been applied from the beginning of the attack, the case has been cured before the convulsive stage was reached, and in those cases in which this stage had been reached, recovery followed in from 5 to 10 days. In the beginning it induces attacks, but this is very shortly overcome.

Moncorvo Filho[70] states that the special bacillus of pertussis is destroyed in its chosen home, the larynx, by swabbing the periglottic region with a 10-per-cent. solution of citric acid with simple syrup. It also constitutes an effective prophylaxis against infection. He succeeded in preventing the disease in many children, living with others infected, by this means, or merely by the administration of small quantities of citric lemonade during the day. He considers resorcin and asaprol the most effective of other remedies.

Eross[71] says that antipyrine, antifebrin and phenacetin, used in several hundred cases, were of great value. The drugs were given in syrup, coffee, or water. Unfavorable results, such as depression and prostration, never followed the administration of any of the coal-tar preparations. Phenacetine seemed to possess the least value. Antipyrine gave the most favorable results. None of the remedies, however, produced such an immediate change for the better, in convulsive attacks, as bromoform. Under its use vomiting and other complications were almost unknown. The convulsive character subsided almost entirely. The beneficial effects were noted in from 48 to 72 hours. The insufflation of resin of benzoin gave the best results of all the remedies used. The beneficial effects were chiefly noted in diminishing the number of the paroxysms, the severity being controlled in a lesser degree. When no improvement follows four or five days' use of the in-

[69] La Méd. Infantile, Jan., '98.
[70] Therapist, May 14, '98.
[71] Archives of Pediatrics, May, '97.

sufflations it is best to discontinue the treatment. The powder must be blown, not only into the nose, but into the pharynx as well.

J. Madison Taylor[72] thinks that antipyrine is of great value in the treatment of pertussis. The average dose to a child is from $^1/_2$ to 1 grain every three hours. Formula employed :—

℞ Antipyrine, $^1/_2$ to 1 grain.
Ammon. chlor., 2 $^1/_2$ to 5 grains.
Syr. limonis, $^1/_2$ drachm.
Aquæ, q. s. ad, 1 drachm.—M.

Or

℞ Antipyrine, $^1/_2$ to 2 grains.
Ammon. brom., 1 to 2 grains.
Ammon. mur., 5 grains.
Syrup, q. s. ad, 1 drachm.—M.

Theodor[73] thinks that palliation is all that can be accomplished in this disease. Vaccination, recently revived by Pestalozza, was employed in ten cases, and the pocks formed regularly and underwent gradual desiccation, but the whooping-cough was not in the least affected. The best treatment for children under a year old is antipyrine; for those between 1 year and two years old, bromoform; for older children the wearing of a mask wet with a 10- or 20-per-cent. solution of carbolic acid. These measures lessen the number of paroxysms, although they do not shorten the course of the disease. Hygiene should take the first place in the treatment of whooping-cough. So long as there is any catarrh, the child should not be allowed to go out-of-doors unless the weather is so fine that it is warmer and pleasanter in the open air than in the house. Pure air in the rooms and warm liquid diet are of the greatest importance.

Rabinschek[74] introduces into the back of the mouth a small tampon of cotton saturated with a 1 to 1,000 solution of corrosive sublimate, and presses it against the lower part of the tongue in such a way that the liquid will bathe the epiglottis and the neighboring mucous mebrane.

This method, with which the author has obtained good results, was applied in 71 cases of whooping-cough by Rocco Gentile; 35 patients were cured after from three to twelve applications; 13 were considerably ameliorated, and the others interrupted the treatment or complications supervened which did not depend upon the whooping-cough.

One of the greatest benefits to be derived from this treatment is the rapid cessation of the vomiting which contributes so much to weaken the patients, who lend themselves very readily to the treatment and become rapidly accustomed to the introduction of the tampon. Gentile has never employed more than one application a day. In a very small number of cases he has observed temporary disturbances such as hæmorrhages of the conjunctiva and of the ear, buccal ulcerations, and slight fever; but these complications are not serious; in fact, children tolerate mercury easily.

M. E. Doumer[75] has satisfactory results in the treatment of whooping-cough by inhalations of ozone. These inhalations may be given for ten or fifteen minutes twice a day. Caillé reports seven cases, and Labbé and Oudin fourteen or fifteen cases in which rapid recovery was obtained with this mode of treatment.

Sidney A. Bontor[76] directs about 20 grains of menthol to be dissolved in an ounce of liquid vaselin in an ordinary

[72] Pediatrics; Amer. Therap., Mar., '98.
[73] Archiv f. Kinder., vol. xxiii, Nos. 4, 5, '97.
[74] Bull. Méd. de Paris, Sept. 13, '97.
[75] Nord Méd. Nov. 1, '97.
[76] West London Med. Jour., July, '97.

nasal spray-producer; as soon as a paroxysm begins, or, preferably, as soon as the patient feels that one is impending, a fine cloud of spray is diffused in front of the face, the spray-producer being held about two feet away; by this means the air in front of the nose and mouth is saturated with the oily particles, and at each inspiration they are drawn into the air passages; this is quite painless, but occasionally a slight spasm of the glottis occurs. The effect of this inhalation is quickly seen, for the mucus is rapidly expectorated and the paroxysm is soon over; so that convulsions are less frequent and vomiting is rare, with the result that the patient loses his dread of taking food and eats with a better appetite, his general condition being thus kept at a higher level.

Bromoform, Marfan[77] thinks, is one of the most valuable drugs in this disease. As it is soluble only in alcohol and glycerin, its administration is sometimes a little difficult, but it can be prescribed with an emulsion of almond-oil and mucilage flavored with orange. The child may get up to 3 drops if about 6 months old; 8 drops when 2 years old; and when over 5 years of age from 20 to 30. The first symptoms of intolerance is drowsiness, and, as this requires large doses, it follows that the drug is not dangerous when used with ordinary precaution. One important point is that during the first stage of its administration the attacks of whooping-cough may be slightly more marked, after which they subside. Another point worthy of note is that bromoform has no injurious action on the broncho-pneumonia. All cases complicated with broncho-pneumonia should be separated from others. The treatment is the same as in any other case, but the antispasmodic treatment should be continued. Cases of whooping-cough should not be allowed out, as they do better, especially in towns, by remaining absolutely in-doors, but it is advantageous to change the case into a different room for the night. So soon as the whooping character of the cough has disappeared the author recommends change of air, especially to the sea-side, as the patient usually has some cough which may last for a considerable time. The duration of the contagiousness extends over the whole period of spasmodic cough.

Arthur H. Bigg[78] states that he has found mercury biniodide to be uniformly efficacious in whooping-cough, not always curing, but reducing this distressing ailment to a comparatively mild and harmless affection. He first employed the remedy on a child of 4 years, directing a powder of a saccharin trituration containing $^1/_{200}$ grain of the biniodide, to be placed on the tongue every two hours. A marked reduction in the severity and frequency of the paroxysms was soon observed. This treatment was kept up for 5 days and then followed by the administration of 30-minim doses of fluid extract of castanæ vesca, mixed with an equal quantity of syrup of Tolu, every 3 to 6 hours. A good recovery, without complications, followed in a shorter time than was anticipated. The writer believes that the mercury biniodide, when exhibited dry on the tongue, gradually disperses over the mucous membrane of the fauces, and by convection, no doubt, reaches the glottis and larynx. Upon these surfaces it exerts a counter-irritant effect, relieving the congested condition of the capillary meshes, and exerting a chemical and

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[77] Jour. de Méd., Mar. 10, '98.

[78] Phys. and Surg., vol. xix, p. 376; Amer. Medico-Surg. Bull., April 25, '98.

solvent influence upon the tough and tenacious mucus, thus facilitating its expulsion from the air-passages, this being the primary and local effect of the drug. The specific action of the drug is directed toward the enlarged glands of the neck, which are in relation with the recurrent laryngeal and other branches of the vagus supplying the air-passages. The result is that the turgescence of the glands is relieved, thus removing a prominent source of irritation to the nerves which have to do with the act of coughing.

Editorial.

MALARIA AND THE SANTIAGO EXPEDITION: A WARNING.

In a recent number of the Philadelphia Press, an editorial writer, alluding to Dr. Sternberg's statement regarding the unfortunate events at Santiago, states that "the real lesson of active operations is that the entire staff, ordnance, quartermaster, commissary, and medical, all broke down;" and again, that "for all this collapse there existed the same reason—the organization of our staff is irredeemably bad. Its departments, with separate authority, muddle everything. The army needs a general staff whose head shall be the commanding general. The present plan invites disaster, and nearly brought it."

Our readers will probably remember an editorial entitled "Malaria and the Cuban Campaign" that appeared in our first war number (May), in which the Madagascar expedition was compared to that in which we were about to embark. Prophylactic measures being also indicated, advance sheets were sent to Surgeon-General Sternberg, in the hope that the points made might prove of some assistance to him. Whether Dr. Sternberg read them is not known; if he did not, he certainly cannot be blamed, for the tremendous duties incident upon the sudden increase of the army from 23,000 to over 200,000 men certainly entitled him to the greatest leniency. It is interesting to note, however, that the views given, emanating from expedition surgeons and commanders, explorers, etc., men who had learned from practical experience wherein the causative factors of malaria lay, have been amply sustained at Santiago, and that, if our men suffered, it is because none of the precautions advocated by them were carried into effect. Indeed, if, in the light of the editorial, the various phases of the Santiago campaign are reviewed, the fact will become apparent that *not one of the causative factors of malaria was missing*, while *all the prophylactic measures were neglected.* The men were literally thrown into a pit of infection, after being weakened aboard ship by poor food and bad ventilation. They were made to dig their own trenches and to sleep in them, thus inhaling, day and night, malarious air of the worst kind; they were riddled with mosquito-bites, thus taking into their blood the now-recognized most virulent element of infection; they stood in water much of the time, thus absorbing through their skin more poison; and, to complete the infection, they were allowed to drink the local water in its natural state,—that is to say, unsterilized by boiling or filtering! We attributed the Madagascar disaster in great part to "unwarranted subservience of all considerations bearing upon the health of the

men to the needs of the expedition." Precisely the same criticism is applicable to the military operations in Cuba, the so-called "needs of the expedition" being by far the main causes of all the sickness among our troops. That Dr. Sternberg has been unjustly censured there is no doubt. Of all the measures advocated in the editorial, but one may be said to have been within his reach, namely: the preventive administration of quinine; but many physicians still object to the use of this remedy, and the surgeon-general may have thought it inadvisable to employ it. Even had he thought otherwise and ordered it the fearful exposure imposed upon the men would have counteracted its prophylactic influence. This is the only fair aspect of the case, and it completely exonerates Dr. Sternberg as regards the breaking out of malarial fever at Santiago.

But there are other factors that need investigation and, perhaps, criticism. The Commissary and Quartermaster Departments seem to have shown marked incompetence; but they also had to contend with the sudden increase of the army to ten times its usual size. They certainly showed utter lack of elementary knowledge, however, as regards food and dress; they fed the men on aliments calculated for North Pole expeditions, and dressed them as if they were going to camp in Bar Harbor! Indeed, the ignorance displayed has been something appalling to students of hygiene and physiological chemistry in the face of present knowledge, and it may be said that these departments prepared the men by reducing their powers of resistance, while "needs" of the military operations supplied the poison.

The Press advocates a general staff whose head shall be a commanding general. We are now talking of *disease*: *the antagonist we will now have to fight on all sides.* What, may we ask, does a general, however well informed he may be as a military man, know of preventive medicine? It is safe to say that General Shafter could not locate his spleen—unless he is already favored with an ague cake! What does he know concerning food chemistry, and of the best means to keep the men healthy and strong in campaigns? No one can, with justice, expect him to possess this class of knowledge; it is not in his line any more than it is in that of any other commanding general. Let it be said, however, that in this ignorance *lies the keynote of the majority of campaigns in which a high mortality from disease has occurred.* The commanding officer simply drives his men through every phase of infection, with death in its trail far more certain than from bullets, and often regardless of the advice of his staff-surgeon, who, several grades below him, has simply to swallow the rebuff. Thus it is that, in matters pertaining to disease in armies, ignorance leads the way. Is it in such hands that the Press would like to see the hygienic management of the troops that are to go to our new fever-laden colonies and protectorates on garrison duty? If the advice should be taken we can predict an appalling mortality, and far better would it be for us to drop Cuba, the Philippines, and other pest-holes than to send thousands of the flower of our youth there to perish!

But the Press is right, in our opinion, when it states that a radical change is necessary. Surgical methods, even when employed in first-aid dressings by the men themselves, gave wonderful results at Santiago. There is no reason why the most advanced teachings of hygiene should not as successfully be utilized, and

we must frankly admit that we have no patience with the so-called "disorganization of actual warfare" as an apology for neglect of sanitary rules, so frequently quoted of late. Disorganization is no more permissible here than it is in the disposal of rank and file in army maneuvers. What we do need, it seems to us, is the grouping, under one *competent* head, of all the services involving in any way the health of the men during peace and war. Constituting, say, three bureaus, including everything pertaining to subsistence, tentage, clothing, quarters, hygiene, medicine, surgery, transportation, hospital ships, etc., the various services would thus operate coherently and form a general department capable of intelligently observing all the rules prescribed by modern science. Of course, this would only be possible under a permanent official, a medical man, who would not have to leave his position when, through dint of labor, he would have acquired all its details. Though a civilian, he should rank as assistant secretary of war, with the relative rank of the highest officer in the army. He should at no time have occupied a position in any of the military, naval, or marine services, so as to avoid all jealousy or friction on that score. The head of each bureau, as at present constituted, being a brigadier-general, there would be no interference or change in the line of promotion or other attributes of the various staffs. In fact, any extensive change in the present arrangements would but delay re-organization and be inadvisable.

Among the advantages gained the following might be mentioned: The various departments would form an entity that would absolutely prevent the recurrence of such unfortunate mistakes as that committed by General Shafter, *i.e.*, leaving behind him at Tampa his reserve medical supplies and his ambulance corps. Supplied from one source, each vessel would have had its stores, general and medical, on board, and could not have left without them. Again, all the features concerning the physical welfare of the men being thus grouped, the importance of the object to be attained would be vastly increased in the eyes of all. At present a general commanding an army corps outranks the head of a bureau, who is only a brigadier; the head of the new department possessing a higher relative rank could insist upon the proper carrying out of all regulations pertaining to the protection of the men against disease, and hold the commanding officer to account in case of neglect of duty in this particular, just as the general-in-chief can hold him responsible for a military fault.

A mere political appointment, based upon party needs, would, in this case, be a great crime, considering the vast importance of the department as a life-saving one. A man of broad knowledge and judgment, and possessing tact, with unusual executive ability, should alone be selected—if such a man can be found. One thing is certain, however, the country will not bear with patience such sacrifices as those already chargeable to mismanagement. The time has come for the administration to thoroughly realize that the new state of affairs has brought us face to face with an enemy that will have to be fought, not with powder and shot, but with strict sanitary measures. Hygiene, drastic hygiene, must now be enforced. Food, clothing, transportation, etc., under the very best conditions, are now in order, and if this warning is overlooked, one of the darkest pages of our history will soon be before us.

CHARLES E. DE M. SAJOUS.

ANTITOXIN AND SERUM-THERAPEUTICS.

The blood-serums of men, sheep, hogs, cattle, and rabbits, contain toxins that cause necrosis, and which are increased in quantity in cases of disease. They can be precipitated from the serum by alcohol, ammonium sulphate, and the chlorides of the heavy metals. The organs of animals in which the toxins are found are also very poisonous; death usually occurs in guinea-pigs from ten to twenty-four hours after the injection of an emulsion of the organ. Curiously enough, these toxins are found in the brain of the horse, although the blood-serum appears to be free from them. In all cases there is marked redness of the suprarenal capsules, and changes in the ganglion-cells of the spinal cord. The serum of persons dying from carcinomatous course or uræmia is not more poisonous than that of normal persons; the organs, however, contain a great excess of toxins, which can be extracted by alkalies, but not by physiological salt solutions; acids and boiling destroy them, and the same is true if they are heated to 176° F. for half an hour, but if they are only heated to 158° F. for a quarter of an hour they retain their toxicity. Possibly there may be a difference between the toxins of the serum and those of the organs. Brieger and Uhlenhuth (Deut. med. Woch., Mar. 10, '98).

Among the complications due to antitoxin serum are: rash, joint pains, pyrexias, and abscess at the seat of injection, but the complications do not appear to bear any relation to the amount of serum employed. More rare complica- are: albuminuria, rigors, vomiting, and coma. Michael (Prac. Lond., Apr., '98).

BACTERIUM COLI COMMUNE.

There are two ways in which the bacterium coli may cause trouble during the puerperium. In the first place, matter escaping from the anus may be conveyed, at labor or later, into the uterus or vagina or into a perineal tear. So admitted, the B. coli may set up a poison manufactory in the interior of the genital canal, and so may produce sapræmia, septicæmia, pelvic or general peritonitis, and all the symptoms of septic intoxication. This is the reason why it should be routine practice to wash out the rectum with a copious enema at the beginning of every labor, to keep the anus scrupulously clean during and after parturition, and to stitch up peritoneal tears as early as possible.

In the second place, constipation and some degree of intestinal paresis are so frequent after labor as to be considered almost normal; and poisons produced within the bowel often find their way through its walls and produce slight feverish symptoms which quickly disappear after the use of an aperient. But sometimes the B. coli itself wanders through the somewhat paralyzed wall of the gut into the peritoneal cavity, and there sets up a poison which quickly causes a condition of profound toxæmia. This explains cases of puerperal trouble in which the discharges remain sweet and normal in quantity, and in which there is no inflammation of the uterus, appendages, or pelvic connective tissue. Thus, also, we see why antiseptic douching and other local treatment is unnecessary and useless in such cases, and why treatment and prophylactic measures alike must be directed toward the cleansing of the alimentary canal.

Viewed in this light, the use of calomel, salines, and nux vomica after abdominal operations is seen to be based on good pathology. Schenck (Archiv f. Gyn., B. 55, H. 2).

BLADDER, MEANS OF EMPTYING THE.

The bladder, when partially paralyzed from parturition or any other cause, can always be made to empty itself perfectly by throwing a large amount of very warm water into the bowel, thereby doing away with the necessity of using a catheter, the bowel and the bladder emptying themselves at the same time. Anderson (Louisville Med. Monthly, June, '98).

CARBUNCLE.

Treatment.—A successful method in treating carbuncles is to fold a piece of aseptic gauze until it forms a thickness of six to eight layers, the surface-area to be somewhat larger than the carbuncle to be covered. The gauze is first thoroughly saturated with Thiersch's solution, then covered with a layer of a 10-per-cent. ointment of ichthyol, and then applied to the carbuncle. A piece of rubber protective large enough to overlap the gauze is now placed on the same to keep in the moisture. A layer of cotton is placed on the protective, and then the bandage is applied and allowed to stay on for two days. When the patient returns to be rebandaged and to have the dressing renewed, the cores are found to have separated from their respective walls, and at the next redressing, which is again in two days, they are found entirely separated, and can be easily and painlessly removed. At the next visit granulation has passed the primary stage, and healing quickly results, leaving an almost invisible scar. The only constitutional treatment necessary is to give cathartics, like fluid extract of cascara sagrada, or castor-oil, and, in individual anæmic or cachetic cases, compound syrup of the hypophosphites. Sol. M. Rosenbaum (N. Y. Med. Jour., June 11, '98).

DRY LABOR.

After premature rupture of the membranes there is often a diminution of the lubricating cervico-vaginal mucus so essential to the easy passage of the child. The writer's custom under these conditions is to use several ounces of lard. This is introduced in lumps and spread about the vagina with two fingers. A good stiff vaselin is even better, if the labor is very tedious, for it remains longer. Either lubricant can be readily combined with an antiseptic, the only implements required being a large shallow plate and a table-knife for a spatula. A. H. P. Leuf (Med. Council, Mar., '98).

ECLAMPSIA, URÆMIC.

Symptoms.—Case of a primapara, aged 24, who at 3 P.M. was found unconscious, cold, collapsed, with weak and rapid (140) pulse; death-like pallor, as if she had suffered from severe hæmorrhage; face and legs œdematous. An hour before she had been delivered of a still-born child by a midwife. She had not expected to be confined for two months to come, and the appearance of the child verified the surmise. At 10.30 P.M., four days before, she had a violent fit, which lasted for about ten minutes, followed in an hour by a second. She was confined at 2 P.M., had a third convulsion about two hours later, and continued to have them at intervals of from one to two hours until 2 A.M. (that is, twelve hours after confinement). Since then she had been free from an attack. She had ten fits in all, two before confinement and eight after. She then lapsed into a state

of coma, and was totally unconscious for about thirty-six hours, after which she rallied sufficiently to take some milk and brandy. Then remained in a state of semi-consciousness until the fourth day after confinement, taking no notice of anyone, but took medicine and nourishment when put to her lips.

Treatment.—Immediately $^1/_6$ grain of pilocarpine was injected hypodermically, after which she perspired freely. On the third day a dose of calomel and jalap was given whereby the bowels were well opened. This was followed by a diuretic mixture. The œdema soon disappeared and her legs assumed their normal shape. Her urine, which was scanty, was found to be highly albuminous; but under treatment it quickly became normal, and convalescence was established. Thomson (Brit. Med. Jour., Apr. 23, '98).

GONORRHŒA, PRIMARY.

Treatment.—Largin, which is a new albumin compound of silver (containing 11.2 per cent. of the metal), is so unirritating that it may be used as an injection several times a day and retained in the urethra for from ten to thirty minutes if so desired; a 1- to 1.5-per-cent. solution is employed. It contains more silver than any analogous preparation. In 47 cases where it was used, 27 were materially benefited, and the average time of treatment required was 30 days; the deep urethra was not involved in any of these. In 8 cases it had no noteworthy effect, and posterior urethritis was developed. When the deep urethra was affected before the remedy was used, its action was not particularly favorable, as only 2 out of 6 cases were cured. Astringents are to be preferred to largin toward the close of the treatment, when the discharge is subsiding. Pezzoli (Wien. klin. Woch., March 17, '98).

The treatment of gonorrhœa by the method of Janet, the technique of which is well known, is simple, free from danger, and efficient; it is shorter than any other known method, and is particularly satisfactory in preventing unfortunate complications. Otto (Wien. klin. Woch., March 24, '98).

The most promising point now, in the treatment of gonorrhœa, would seem to be Quincke's suggestion as to temperature. The gonococcus is extremely sensitive in cultures to even slight variations of temperature. Dogs with a constant temperature of 102.2° F. cannot be inoculated with gonorrhœa, and Finger found that malarial and other patients with a temperature of 104° F. would not take it. Quincke puts a Leiter coil around the penis and keeps the temperature at 104° F. for twenty-four hours, and has got some very satisfactory results. Walsh (Therap. Gaz., April, '98).

HEPATITIS.

A very handy and accurate method of recording the size and position of abdominal organs or tumors has been called the "Keith method." It consists in first carefully percussing out the organ, —say, the liver. The limits of percussion-dullness are then marked on the skin by black paint (Indian ink); then with red paint the ribs are mapped out by a broad band drawn on the skin over each rib. When the coloring fluids have dried, a piece of thin, transparent muslin is placed over the front of the body, large enough to cover the body from the clavicles to the pubes. With red, paint the red lines over the ribs; the arch of the subcostal angle, the nipples, and the umbilicus are then traced on the muslin, and finally the brush is drawn along the black outlines of the liver as they are seen through the muslin. On the mus-

lin, the patient's name and the date of drawing, as well as the disease, should be painted for future reference and comparison with note-book. By this method one preserves a "life-sized" drawing of the liver and a permanent record. James Cantlie (Clin. Jour., June 22,'98).

Treatment.—The first essential in all inflammatory conditions in the region of the liver is rest in the horizontal position, so as to take the weight of the arms off the chest, and thereby allow thoracic breathing to proceed more freely. It is also essential to procure a diet that will allow of physiological rest. The only form in which a milk diet is admissible is in the form of whey. Starchy foods ought also to be withheld from the dietary. Animal food in its most digestive form is the keynote of successful dieting in hepatic inflammatory derangements. Raw meat-juice, raw meat itself, chicken-soup, and weak beef-tea should form the elements of diet, while drinks of hot water, and weak, freshly-made tea, with lemon, are the best. Three grains of calomel given on an empty stomach is, perhaps, the best form of initial purgative in hepatitis, and, if the bowels are not freely moved after twelve hours, a saline draught should be given, preferably sodii sulphas effervescens, $^1/_2$ ounce in a small quantity of water. When pus is suspected, or has actually formed, one should aspirate, tap, and drain. J. Cantlie (Clin. Jour., June 22, '98).

INTRAVENOUS INJECTIONS.

Increasing experience with intravenous injections has led to the following conclusions as to the treatment of patients suffering from uræmic attacks:—

Hypodermoclysis should be used, provided the symptoms are not pressing and there is no trouble with absorption because of œdema; when the danger is pressing, or œdema is present, even in a very slight degree, intravenous injections should be resorted to.

In a large proportion of cases the patient should be bled, particularly if nervous excitement or convulsions are present or threatened, because this will relieve cerebral congestion, aid in the elimination of toxins, and aid in the absorption of the fluid from the subcutaneous tissues; or, if intravenous injections are used, it will make room, so to speak, for the artificial serum. This is of importance, unless the circulation is evidently very feeble from profound debility and anæmia. The saline solution should be carefully prepared, and if possible common salt alone should not be employed. The following formula, suggested by Locke, is prepared in concentrated sterile form by Parke, Davis & Co., so that 1 ounce added to a quart of distilled and sterile water makes a solution which will at once fill the vessels, wash the blood, and support the circulation:—

℞ Calcium chloride, $3\,^3/_4$ grains.
Potassium chloride, $1\,^1/_2$ grains.
Sodium chloride, $2\,^1/_2$ drachms.
Sterilized, distilled, or tap-water, sufficient to make 1 quart.

The apparatus used by the writer is a glass container, such as is used for irrigation purposes in antiseptic surgery, set in a frame, in order that it may stand on a table rather than be hung against the wall. To the bottom of this container is attached 4 or 5 feet of Para rubber hose, and in the end of this rubber hose is inserted a plain glass cannula; a slip is placed upon the hose, in order that the flow may be controlled, and the cannula and tube which have been attached to the blood-vessel are joined to the tube running from the

irrigator at the moment when they are both completely filled with liquid, so that no globule of air will be contained in the tube. This is most easily accomplished by tying the cannula in the vein of the arm and then filling it and its attached rubber tubing with some of the saline solution by means of a pipette.

Hypodermoclysis used in hæmorrhage in typhoid fever with the most happy results. It is far less disturbing than intravenous injection, the system takes up the liquid as it is required, and syncope disappears. An ordinary hollow needle may be attached to the tube already described for this purpose.

The solution should be warmed to a temperature of about 100° F. The dose ranges from $^1/_2$ to 1 liter, and the frequency of the injections varies according to the exigencies of the case. H. A. Hare (Therap. Gaz., July 15, '98).

The best and most convenient solution for intravenous injection is a simple saline solution: 7 parts of sodium chloride to 1000 of sterilized water. The quantity ranges from a few ounces up to three or four quarts. The chief guides in any case are the return of the pulse, with increase of volume and diminution in rate, return of color, facial expression, and consciousness. The temperature of the solution should be kept at about 100° F. while injecting. A convenient way of handling the solution is as follows: Have ready 3 quarts of a cooled, boiled solution containing 12 drachms of salt. When the time arrives to administer the injection, take any convenient quantity of the above solution and add to it an equal volume of boiling water; the solution is then ready for use. The fluid should be forced in gently and the pulse should be carefully watched for fear of overloading the vessels.

The technique of the operation is simple. The median basilic vein is usually selected. After the parts have been thoroughly cleansed and the forearm placed in a position of supination, an incision one inch in length should be made over the vein at the bend of the elbow and carried through the skin and superficial fascia. This incision will bring into view a layer of fat, which is very often seen and very rarely spoken of in our text-books. With a blunt instrument the fat can be torn through and the vein exposed. Three catgut ligatures should be placed under the vein, and one of the ligatures should be drawn well down into the lower angle of the wound and immediately tied. An opening just large enough to receive the cannula should be made in the vein-wall above the point where the ligature was tied. Into this opening the end of the cannula is introduced. A second ligature is now tied around that portion of the vein which includes the end of the cannula. This ligature not only holds the instrument in place, but prevents the entrance of air. After the required amount has been injected, the third ligature should be tied in the extreme upper angle of the wound above the end of the cannula. The cannula can now be taken from the vein, or that part of the vein between the upper and lower ligatures can be excised, removing the excised portion of the vein with the cannula in situation. The wound needs no drainage, is closed with several silkworm-gut sutures, and dressed with aseptic dressings.

The instruments used in conveying the solution must be as clean and as simple as possible. When there is no special instrument at hand for introducing this solution by the intravenous method, an ordinary glass or rubber

syringe, with a piece of India-rubber tubing attached to its nozzle and a cannula attached to the other end of the tubing will suffice. The cannula can be of glass or metal. A small goose-quill would answer equally well in emergency cases. One of the most convenient and safest instruments for this purpose is Collin's transfusion-apparatus. G. W. Spencer (Therap. Gaz., Mar. 15, '98).

KALA-AZAR.

Etiology.—This is a very fatal disease of obscure nature prevailing among the coolies of Assam. There are good reasons for believing that it arises from the presence of a parasite, a form of ankylostomum, and the effects of the same upon a population that for generations has been continuously poisoned with malaria. If this view is correct, the malady is more in the nature of an anæmia than a malarial disorder *per se*. The ankylostomum is admittedly very common in Assam, although in many cases but few of the worms were found in post-omtem in persons who presented marked symptoms of kala-azar during life; but this is doubtless due to the fact that parasites are digested, for their chitinous envelopes are to be found in the intestines in such cases.

Diagnosis.—The color of the sclerotic is a good diagnostic test between cases of pure malarial anæmia and those of anæmia (kala-azar) due to ankylostomiasis, being yellow in the former and white in the latter. Giles (Ind. Med. Gaz., Jan., '98).

LUPUS.

Treatment.—Permanganate of potassium, freshly prepared from dehydrated dried crystals, is applied in a layer, 3 to 5 millimetres in thickness, over the whole surface of the lupus and the suspected portions of the surrounding tissues. In case of deeper ulcerations with undermined edges, the powder is applied after curetting two or three times in order to level the uneven surface. In all cases a layer of medicated cotton is put over it to keep the powder in place and absorb the secretions and eliminated material. In most cases a single application of the powder suffices. Kachanovsky (Med. Times, July, '98).

MALARIA.

Only about 10 per cent. of the malaria that occurs in the tropics is at all like ordinary malaria. The quotidian and tertian forms do occur in about the proportion mentioned; but besides these there are two other forms distinctly tropical. At the height of the paroxysm in tropical fever, there is a persistence of the highest febrile temperature for some thirty-six hours, in marked distinction to the almost immediate fall of the temperature after it has reached its acme, as is always seen in America and Europe. The parasite of the tropical forms is very similar to that of the tertian fever, but the plasmodium is smaller in the various stages. The so-called spore-forms, which are really fully formed, minute plasmodia, set free after the breaking up of the rosette forms, are not more than one-third the size of the hæmatozoic sporulation (?) forms of Italian observers. Partly, perhaps, because of the extremely-small size, Koch has never seen them in the blood, but has seen them in the spleen. The constancy with which certain forms of the parasite occur at certain stages of the disease is remarkable. An examination of the blood specimen, though the patient had never been seen, enabled one to say positively in what stage of the dis-

ease he was when the blood was withdrawn. There is especially noticeable a small signet-ring form of tertian fever, and having even more distinctly the crescentic enlargement of the ring opposite the signet. In the tropics this is not more than one-half as large as the tertian signet-ring form, and is always found just after the paroxysm is over. Entirely too much quinine is given in the tropics, and without due regard to its specific action. Fifteen grains is enough for prophylaxis, and scarcely more is needed to avert a paroxysm during the course of the disease if it is given while the parasites are especially irresistant to its action. As to the conveyance of the disease, air and water as media of the contagion being absolutely excluded, Koch thinks that the disease is spread by mosquitoes. It exists only where mosquitoes are present. Mosquito-nets afford effectual protection against the disease when wandering over infected belts of territory. A direct inoculation from person to person by the mosquito seems improbable. Berlin Correspondent, Med. News, July 9, '98.

NAPHTHALIN POISONING.

Eight grains of this drug rapidly induced diarrhœa, tenesmus and strangury; four hours later vomiting began which continued for ten hours, the vomited matter being slightly streaked with blood. Fourteen hours after the drug was taken agonizing pain suddenly developed in the region of the kidney, which persisted for twenty minutes. The urine was normal in quantity, reddish-brown in color, acid, with a specific gravity of 1014, and contained 25 per cent. by volume of albumin. There also were a few blood-clots, an abundance of granular casts, urates and mucus; considerable depression; the pulse was 45 and weak; temperature normal. Severe hemicrania developed on the second day. On the fourth day the urine was normal, and, except for a sense of weakness, recovery was complete. Otte (Med. Record, Apr. 3, '98).

PENIS, AMPUTATION OF.

The parts having been thoroughly cleansed, a rubber tube is tied about the base of the organ, and a circular incision made through the integument at a suitable point. The skin is next dissected back for $^3/_4$ of an inch, making a flap that is rolled upward toward the pubes. A No. 20 (French) sound is passed into the urethra and held by an assistant in such a manner that the penis forms a right-angle with the body; the blade of a straight bistoury is inserted with the cutting-edge pointing upwards at the point to which the flap has been rolled and is worked in between the urethra and the corpora cavernosa until it comes out at a corresponding point on the other side; the blade is then turned toward the corpora cavernosa, and the latter divided. The corpora cavernosa are then taken between the fingers of the left hand, and traction made thereon while they are being dissected away from the urethra for the space of $^1/_2$ inch. The sound having been withdrawn, the urethra is now divided. Thus the operation consists of an amputation through the anterior part of the organ in such a way that the stump, or divided corpora cavernosa, has a urethra $^1/_2$ inch longer than itself, and an integumentary flap $^3/_4$ inch longer. Next the two dorsal arteries and the two arteries of the corpora cavernosa are tied with fine catgut, also the small artery of the septum, if present, and any oozing of blood is controlled, as well as possible, by peroxide of hydrogen or hot water. The margins of the cut integu-

ment at the upper and lower surfaces of the organ, in the median line, are caught with thumb-forceps, and traction sutures passed through each at these points and held by assistants. The urethra is next caught in the same way above and below the median line and traction sutures inserted and held in such a manner that the middle of the cut surface of the integument. A fine, silk suture is passed through the walls of the integument and also of the urethra (not through its lumen), on either side; these are then tied, holding the urethra and skin in place in the relations to each other described. The integuments above and below the urethra are then united by interrupted sutures. After this, four sutures of fine silk are passed through the integument and the urethra, piercing the lumen of the latter, and they are then pulled up in the middle and tied on either side. Thus the urethra is united to the skin by ten sutures, four on each side and one each above and below, placed with thorough approximation. The traction sutures may now be withdrawn, and a sound passed through the new canal into the bladder, after which the latter is replaced by a No. 10 French catheter and allowed to remain for a few days, held in place by adhesion straps attached to the pubes. Guitéras (Jour. Cut. and Gen.-Urin. Dis., May, '98).

PHTHISIS.

Treatment. — Guaiacol employed in the treatment of a number of cases of phthisis, in doses as large as three drachms daily,—60 minims thrice daily,—and in every instance well borne. It decreased cough, lessened expectoration, and caused an increase of weight; it also reduced fever. It is readily taken, either in capsules or in milk.—Squire (Lancet, Lond., April 9, '98).

RHEUMATOID ARTHRITIS.

Treatment.—The effects of the carbonate of guaiacol given in doses of 5 to 15 grains three times daily become apparent very quickly. Besides the carbonate internally, a mixture of equal parts of pure guaiacol and olive-oil should be painted over the affected joints at night. Bannatyne (Aerzt. Rund., vol. viii, No. 13, p. 193).

RHUS-TOXICODENDRON POISONING.

Poisoning by "ivy," "barley," "certain weeds," and "certain oaks" can be soon cured by washing the poisoned parts with sweet spirit of niter, or with sweet spirit of niter, 1 ounce, to which is added sugar of lead, 10 grains. W. H. Young (Med. World, July, '98).

SALINE INJECTIONS.

It is well-known that salt-water injections can be given intravenously in case of great hæmorrhage accompanied by shock, and that they frequently do a great deal of good. So, too, subcutaneous injections of artificial serum are often exceedingly valuable. The writer claims, however, that the use of saline solution by the bowel is followed by good results and has none of the disadvantages of either intravenous or hypodermic injections. The patient receives a rectal injection of a pint of hot salt solution in the proportion of 8 per 1000, and this may be repeated, if the collapse is great or the hæmorrhage has been great, two or three times in the course of a day. Cases observed where as much as 3 quarts have been absorbed in the course of twenty-four hours. Should the bowel become intolerant, then other methods

have to be resorted to. Pauchet (Jour. de Méd. de Paris; Georgia Jour. of Med. and Surg., July, '98).

SCABIES.

Treatment.—In two cases of itch when tincture of benzoin was used the results obtained after the first treatment were cessation of the itching and a lessening of the eruption. The patient was cured after two days of the treatment. Holstein (Rev. gén. de Pharm. et d'Hyg. Prat., vol i, p. 5, '98).

SCROFULA.

Treatment.—In the treatment of strumous children (chronic eczema, impetigo, stomatitis, ophthalmia, chronic bronchitis, chronic enteritis with prominent abdomen, etc.) arsenic iodide has given excellent results. From 1 to 20 drops daily of a 1-per-cent. solution in milk, commencing with small doses and gradually increasing can be given. Rousseau (Med. Press and Circular; Phila. Med. Jour., June 18, '98).

SYPHILIS, INJECTIONS OF MERCURY IN.

The use of soluble salts of mercury is absolutely inferior to other methods, since only a small amount of the medicament can be introduced at one time, and this is so rapidly excreted that the effect is very slight. Of the insoluble salts, the thymol-acetate is preferable, though in very threatening cases there is nothing so good as calomel; the objections to the calomel are greater pain at the seat of injection, the greater frequency of abscess formation, and the great danger of pulmonary embolism. The salicylate and thymol-acetate salts may be employed in doses of from 1 to $1\,^2/_3$ grains every five days. Of calomel the dose should be from $^5/_6$ to $2\,^1/_2$ grains injected once a week, six to eight injections usually being sufficient for a cure. Finally, the injection of the insoluble salts surpassed all other methods in efficacy, and with proper antiseptic precautions is almost always safe. Filaretopoulo (Jour. des. Mal. Cut. et Syph.; Brit. Jour. Derm., May, '98).

TOBACCO-AMBLYOPIA.

Symptoms.—The symptoms of tobacco-amblyopia and of that due to alcohol are absolutely identical. Certain authorities, however, hold that it is possible to diagnose between the two by the form and position of the scotoma; but most observers have not been able to confirm this statement. There seems to be no definite rule concerning the consumption of alcohol, but in the case of tobacco, though the amount is subject to variations, it is usual and convenient to fix a limit of a quarter of a pound of strong shag per week. This is the dose usually found in cases of tobacco-amblyopia; but it has to be repeated for some time. It has been stated that tobacco-amblyopia rarely occurs before the patient has consumed two and a half hundredweight of tobacco, and this at a quarter of a pound per week means steady smoking for about twenty-five years. The quality of the tobacco is not without influence; the more expensive tobaccoes contain, as a rule, much less nicotine than the cheaper varieties. Tobacco-amblyopia is less common among the consumers of expensive tobacco. Certain races are, perhaps, immune. The Cubans appear never to suffer from amblyopia, and the Turks are equally fortunate, though both are very large consumers. The general health has a very important bearing. In a large majority of all cases the amblyopia occurs when, from one cause or another, the system is depressed.

De Schweinitz holds (and most authorities with him) that either the tobacco must come into direct contact with the mucous membrane of the mouth, or the nicotine must be dissolved in the saliva and swallowed. There are two obvious objections to this view. The first is that chewing-tobacco ought to be a very harmful method of consumption, whereas it is, in reality, one of the least likely to produce amblyopia; and the second, that employees in tobacco-factories who do not themselves consume tobacco sometimes suffer from the disease. They must, however, in their trade inhale large quantities of the dust. The hypothesis, on the other hand, gives a very reasonable explanation why the Turks should be immune, as neither tobacco nor nicotine can reach their mucous membrane if the ordinary form of Eastern pipe be employed—nor readily by cigarettes, which are now more ordinarily smoked. The tobacco used by the Turks is much lighter than shag, containing only about 3 to 4 per cent. of nicotine, as against 6 to 7 per cent.; but the large quantities consumed by the Turks would equalize their chance of suffering from this disease if the total amount of nicotine were the only factor. The cause and symptoms of tobacco-amblyopia are usually very constant. There is almost always a slowly-progressing failure of vision—so slow that it is often a matter of months before the patient attends a hospital, when his vision is found reduced to perhaps $^{6}/_{36}$ in each eye. Usually the eyes are affected nearly symmetrically and equally. Occasionally one fails some time previously to the other. The manner of failure is not always the same. Perhaps, most commonly, vision is stated to be better in a dull light. The failure may not be equal for near and distant objects; sometimes distant vision fails in excess of near vision, sometimes the reverse is the case. Sometimes the patient has noticed a color-defect; thus, one man compared his state to seeing through a blue veil; another stated that everyone he met looked pale and ill; but it is comparatively rare to hear any such voluntary complaints. H. B. Grimsdale (Treatment, June 23, '98).

UTERUS, DOUBLE.

During a gynecological examination for some minor disorder, a double uterus was discovered in which both sides were functional. Two sounds being introduced, one pointed toward the right, the other toward the left side. Some time after this a girl weighing $10\,^{1}/_{2}$ pounds was born from the left division of the uterus, and $1\,^{1}/_{2}$ years later a boy was born from the right, the labor being normal. Kendall (Va. Med. Semi-Monthly, May 27, '98).

VOMITING OF PREGNANCY.

Treatment.—Orexine given in doses of $4\,^{1}/_{2}$ grains two or three times a day, followed by a little cold fluid, water or milk, has proved very prompt in relieving hyperemesis gravidarum. R. Frommel (Therap., vol. viii, p. 141, '98).

XANTHOMA.

Treatment. — Several cases of xanthoma treated by monochloracetic acid with a result of the complete disappearance of the disease, the only thing noticeable being a slight lightening in color at the site of the lesions. The objection to excision is on account of the pain. In using monochloracetic acid there is no pain, and, if the eyes are properly shielded, no danger of injuring these organs. Considerable swelling of

the surrounding tissue is sometimes observed, but this soon passes off. The acid should only be applied to a limited surface at a time, not larger than a split pea. When first applied the yellow lesions almost immediately turn white; in a short time a dark crust appears, which should be allowed to separate spontaneously. James C. Maguire (Jour. Cutan. and Genito-Urin. Dis., July, '98).

NOTES AND COMMENTS.

THE F. A. DAVIS COMPANY, Publishers. GEO. B. CREVELING, Business Manager.

"The Treatment of Choleraic Diarrhœa" is the title of a well-printed and neatly bound monograph issued by the Lambert Pharmacal Company, of St. Louis. The book consists of a number of papers which have at different times been published by well-known writers in various medical journals. In these papers the causation, prophylaxis, and treatment of the diarrhœa of infancy and childhood are thoroughly considered. Antisepsis of the intestinal canal is now recognized as the essential feature in the treatment of these disorders. It is consequently a high tribute to the worth of that preparation, known as listerine, that all these articles which have been collected together mention the efficacy of listerine in this class of disorders. The composition of listerine guarantees its possession of active virtues. This book is worth an attentive perusal. To those of our readers who are sufficiently interested to apply for a cloth bound copy of "The Treatment of Choleraic Diarrhœa," the Lambert Pharmacal Company will send a copy free of charge.

Treatment of Corpulence.—That thyroid feeding has proved an efficient remedy in the treatment of corpulence is now a well-known fact, established by a large number of careful clinical observations. There is still, however, a great diversity of views as regards the best means of obtaining the effect of thyroid medication. While some authors prefer administration of the fresh gland, others make use of fluid preparations, or dry extracts. There can be no question, however, that the most reliable, as well as the safest and promptest, results are obtained from the active principle of the thyroid in the form of a trituration with sugar of milk, named iodothyrine. By resorting to this form of thyroid medication all its objectionable features are entirely removed. Inasmuch as the amount of active principle present in the thyroid extracts in the market has been shown to vary greatly, it is impossible to adopt any uniform dosage, or to expect any uniform results; besides, thyroid extracts contain a considerable proportion of albuminous by-products which decompose readily and thus become a source of toxic effects when ingested. Still another objection applies to them: their effect, when internally administered, depends to a great extent on the completeness of their digestion and absorption. On the other hand, iodothyrine has none of these disadvantages. As it is the active principle of the gland, it requires no preliminary digestion, but is at once absorbed and promptly produces its effect. Being a substance of definite composition, its dosage can be easily regulated in accordance with the effect desired. Lastly, as it is free from all decomposition products it can be administered without any fear of toxic or unpleasant secondary effects.

Syrupus Roborans.—Syrupus roborans, being composed of compound syrup of the hypophosphites in conjunction with quinine, manganese, and strychnine, is a valuable reconstituent in debilitated conditions of the system, and is particularly useful during convalescence from serious illness. Its tempo-

Notes and Comments (continued).

rary use in tertiary syphilis accompanied by anæmia has been found to answer a good purpose in enabling the stomach to tolerate the iodide.

Dr. Becker's Compound Digest.—This preparation contains the digestive principles from the stomachs of different species of animals without admixture of foreign substances. It is recommended as an active medicinal agent in cases of indigestion and ailments dependent upon digestive failure. It is prepared as a powder and in the form of 5-grain tablets. The dose for adults is 5 grains.

The Best and the Cheapest.—In prescribing either medicine or nutriment, a physician must often consider the question of what is the most economical as well as what is the best for his patient. And it is only occasionally that he is made happy by the knowledge that the cheapest is the best. He always knows that "the best is the cheapest," but this helps him very little if economy must be thought of.

John Carle & Sons point with pride to the fact that their prepared food, imperial granum, is the most economical as well as the best food on the market, and in proof of this, they ask physicians to carefully note the weight of their handsome "small" and "large" size, air-tight tins, and also to kindly notice the length of time either one will last, bearing in mind that their sterilized tins form the lightest as well as the safest retainer that can be used.

Vaccine Virus.—The practice of vaccination has been of incalculable benefit. It has spared countless thousands of lives. Scarred faces and ruined eyes are no longer common, as they were prior to Jenner's discovery. In order, however, to obtain the protective effects of vaccination we must be provided with an efficient lymph. A lymph of unexcelled quality is prepared by the New England Vaccine Company, of Chelsea Station, Boston, Mass., to whom our readers may apply for full information concerning this product.

White Rock Ozonated Lithia Water.—This spring water is both palatable as a beverage and possessed of valuable medicinal properties. It is, therefore, doubly useful in cases of chronic and subacute gout and rheumatism, as well as in the numerous morbid states which flow from an excess of uric acid in the system.

Capsules and Perloids.—Planten's capsules and perloids are so well known to the medical profession that it is unnecessary to do more than mention them in these columns. Our attention has been called, in particular, to Planten's capsules and perloids of sandal-oil. In these we are furnished with an excellent means of administering an undoubtedly active remedy.

Now is the Time to Buy a Vehicle.—This is the season of the year when prices are "punctured." There are some very attractive vehicles, at some astonishingly low prices, now being advertised by the Columbus Phæton Company. This is a "before inventory" sale which the physician should take advantage of.

Stamp Tax.—Peacock Chemical Co., St. Louis, Mo., have decided they will pay the stamp tax themselves and thus not raise the price of their well-known preparations, Peacock's bromides and chionia.

Notes and Comments (continued).

Effervescent Salts. — Mr. William F. Horton, of London, Eng., will be at Messrs. Lehn & Fink's office, 128 William St., New York City, for a number of months, to give personal attention to the interests of Alfred Bishops & Sons, Ltd., for whose effervescent salts and other pharmaceutical preparations Messrs. Lehn & Fink are the sole selling agents for the United States and Canada.

All physicians are desirous of having a neat sign, and those made of glass and metal by J. W. Russell & Co. seem to give universal satisfaction. Write them for price list.

Southern Railroad.—The train service during the approaching winter, between Philadelphia and resorts in Florida, over the Southern Railway, it is said, will be the finest ever offered, and those who are now contemplating taking a trip, we would advise consulting the folders and literature issued by that railway company.

Red Cross Society.—The local Red Cross Society is in need of aid, and has issued an appeal to the people of Pennsylvania, which we hope will meet with a prompt response. If you cannot send money, there are half a hundred other minor things that will be equally as acceptable, ranging all the way from a can of fruit or a handkerchief up to kits of mackerel or barrels of salt pork. The Red Cross Society is a visible embodiment of our national charity, and we hope their appeal will meet with a hearty response.

Sharpe & Dohme.—We have received from Sharpe & Dohme, New York City, their latest catalogue, which will cheerfully be sent to any of our subscribers who ask for a copy.

Cosmopolitan Magazine. — The Cosmopolitan Magazine for August is a particularly interesting number. Among other articles of interest is one by Hon. Lyman J. Gage, on "The United States Treasury Department;" illustrated by T. W. Fitzpatrick. Another interesting article is "Francis Joseph—The Beloved Monarch;" illustrated by C. F. Dewey.

Kryofine.—This new drug, to which we have already called attention, is the subject of recent papers by Professor George Frank Butler, of Chicago, and Drs. Sidney V. Haas and J. Bennet Morrison, of the Mt. Sinai Hospital, New York. Professor Butler values kryofine particularly on account of its anodyne influences. He has given it beneficially

Notes and Comments (continued).

in migrane, various forms of neuralgia and to subdue the pains of locomotor ataxia and certain spinal diseases. After using kryofine in one hundred and fifty cases, Drs. Haas and Morrison conclude that it is an excellent antipyretic, analgesic and hypnotic.

Supra-orbital Neuralgia.—In Die Heilkunde Dr. R. Bloch reports a severe and particularly obstinate case of supra-orbital neuralgia of five years' duration. In the last attack all the customary remedies were tried without avail. The neuralgia was regarded as of reflex origin. Finally recourse was had to salophen in 15-grain doses four times daily. After taking four of the powders, the patient slept well and had no attack on the following day. The drug was continued until 3 drachms had been taken, and since then there had been no recurrence of the neuralgia. Tenderness of the supra-orbital region had entirely disappeared.

Henry's Three Chlorides.—Amenorrhœa may be due either to a local or constitutional defect. It frequently follows

Notes and Comments (continued).

grave constitutional diseases, but most frequently accompanies anæmia or chlorosis of young women.

Here the treatment is plain: general nutrition, fresh air, moderate exercise, and such tonics which will not only restore the strength of the system, but improve the condition of the blood. We believe among the vast number of tonics, Henry's three chlorides to be the best. A glance at the formula will suffice to satisfy any physician of its special merits in the treatment of amenorrhœa due to constitutional defects.

Artistic Home Decorations. — It must certainly be a great object to have one's home artistically decorated and, at the same time, inexpensively. The firm of John F. Douthitt, 236 Fifth Ave., New York City, makes a specialty of this work. They have in their employ many artists, some of whom are gold medalists of the Paris Salon. The work in which this firm is interested is tapestry paintings, wall-papers, decorations, tapestry materials, goblin-printed burlaps, goblin art drapery. They also are prepared to give decorative advice by mail.

The Internal Treatment of Pruritus.—

Itching is a most distressing manifestation, and when extreme seems as hard to bear as actual pain. It may be a symptom of cutaneous disease or it may arise from many internal causes. Dr. Drews has reported very favorably of the internal use of salophen in cases of pruritus. He has made use of this remedy in prurigo, urticaria, eczema, and psoriasis as well as in pruritus due to diabetes. The remedy was given in doses of 1 gramme (15 grains) every two hours until relief was obtained.

Notes and Comments (continued).

If you leave home for the summer, go where you will find almost literally a new world. Such a spot is Yellowstone Park. There is no place like it in the world. You will be astonished at what you see and learn there. A month's outing in those mountains 7000 feet above the sea level, in an atmosphere pure and invigorating, would add years to your life. There are four modern hotels, good roads—maintained by the United States Government—for riding, driving or cycling; riding horses and pack trains. Geysers, canyons, mud springs, lakes, cataracts and cascades in large number are crowded into a space 54 by 62 miles in size. If you can afford it, you wrong yourself by not going there, especially if you are a patriotic American. If you cannot afford it, then go to beautiful Leech Lake in Minnesota, a new and popular resort. New hotels, fine fishing and hunting, and good boating at reasonable rates. Send Charles S. Fee, of Northern Pacific Railway, St. Paul, Minn., six cents for Wonderland, '98, that describes by pen and picture both resorts. Mention where advertisement was seen.

A Sheet Anchor.—On September 10th, 1897, a well-known New York physician of the Third Avenue Cable Railroad Company returned to the New York office of the Norwich Pharmacal Company ninety-four one pound empty unguentine jars. In a letter accompanying the jars the doctors says: "The jars I return to you to-day represent the number of pounds of unguentine I have used since December 1st last. I have from twelve to fifteen cases a day, motormen, conductors and stablemen suffering from slight wounds, abrasions, cuts, bruises and burns, and about the only

Notes and Comments (continued).

treatment I make is to give them a small box of unguentine. It is certainly my sheet anchor in practice, as in every instance it heals all the above cases quicker than anything I have ever used."

Home-seekers' Excursions.—On the first and third Tuesdays in August, September, and October, 1898, the Chicago, Milwaukee & St. Paul Railway will sell round-trip excursion tickets (good 21 days) from Chicago, Milwaukee and other points on its line, to a great many points in South and North Dakota and other western and southwestern states at about one fare. Take a trip west and see the wonderful crops and what an amount of good land can be purchased for a little money. Further information as to rates, routes, prices of farm lands, etc., may be obtained on application to any coupon ticket agent or by addressing the following named persons: W. E. Powell, General Immigration Agent, 410 Old Colony Building, Chicago; H. F. Hunter, Immigration Agent for South Dakota, 291 Dearborn St., Chicago, or George H. Heafford, General Passenger Agent, Chicago, Illinois.

Respirazone (Tilden's).—Respirazone is described as a skillful combination of old remedies and is recommended as useful in the treatment of asthma and croup.

Pixine: an Excellent Ointment.—The constituents of pixine render it an admirable application in numerous local affections. This ointment is composed of tar, turpentine and Burgundy pitch, made up with beeswax and an oleaginous base. It possesses antiseptic, stimulant, and absorbent properties. It is a serviceable application to bruises, simple and infected wounds, ulcers and chronic diseases of the skin. Dr. Geo. L. Meredith, of Troy, N. Y., finds it a valuable application to inflamed os uteri. Pixine is made by the Troy Chemical Company, of Troy, N. Y., who will furnish physicians with complete information regarding this product.

Elixir Maltopepsine (Tilden's). — The elixir maltopepsine promotes the digestion of food and also possesses nutrient properties. It is used with success in the treatment of dyspepsia, and is of service in the diarrhœal ailments of children.

The Prompt Solution of Tablets.—The manufacturers of antikamnia take the precaution to state that when a prompt effect is desired the antikamnia tablets should be crushed. Antikamnia itself is tasteless and the crushed tablet can be placed on the tongue and washed down with a swallow of water. Antikamnia and its combination in tablet form are both convenient and efficient.

Peter's Peptic Essence Co.—This is an active and palatable preparation which contains all the digestive ferments. It promotes the digestive process and is highly valued in disorders of the alimentary tract and those painful conditions dependent upon indigestion.

maker, whose great work on "Materia Medica and Therapeutics," now in its Fourth Edition, and used in a hundred colleges, is known and read all over the English-speaking world. This portion of the "**Bulletin**" alone, published in book form, would comprise a "Formulary" far in advance of many on the market, whose price is double that which has been charged the fortunate subscribers to the "Bulletin." It has kept its readers fully informed as to college and society happenings; has given hundreds of timely hints, which have been of great service to its readers. Has published a series of articles relating to that great "American Riviera," the "West Coast of Florida," that has been of incalculable service to its readers in aiding them to intelligently advise their consumptive and rheumatic patients upon economic as well as hygienic topics.

It has given its readers no less than 350,000 words of matter equal to the usual contents of a 700-page book, selling at an average price of $4.00, as, for instance, that excellent book: Gray, **on Nervous Diseases.**

But the "**Bulletin**" purposes to do even more during the coming year, and in addition give its friends an opportunity seldom equaled in journalism.

Old subscribers can have their subscriptions advanced in availing themselves of this splendid offer. New subscribers can have their subscriptions begin with the first of January, 1899, or sooner if they prefer. **Whether you are an old or a new subscriber all you have to do is to send us cash to the amount of $1.75 and promptly receive a copy of Drs. Grandin and Jarman's "Obstetric Surgery" and the "Bulletin" will be sent you regularly for one year.**

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P. S.—Upon the reverse side of this announcement will be found a specimen page of Grandin and Jarman's "Obstetric Surgery."

As the cord comes down it is to be drawn upon from the *placental* side, and if it is over one of the legs it must be released (Fig. 53) and placed in the most favorable position as regards pressure. In rare instances it will be impossible to draw the cord down without making undue traction. If such should prove to be the case, it should be secured by means of two artery-clamps and cut. Of course, if this is done, it will be necessary to hasten the delivery as much as possible.

When the scapulæ appear the arms must be liberated before extraction is continued. Under favorable circumstances, —that is, if the assistant has kept up intelligent pressure on the fundus, or if the cervix was fully dilated previous to the

Fig. 53.—Method of Releasing the Cord.

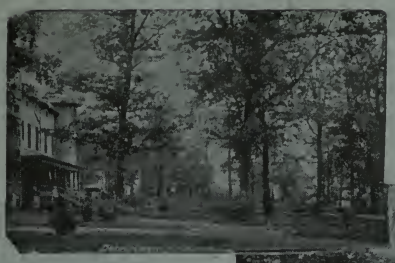
version, or if the operator has not made traction in too rapid a manner,—the arms will be folded on the chest and their extraction will be easy.

Even in the hands of the best operators and with the best assistants the arms sometimes become unavoidably extended. Although their extraction must be accomplished in as rapid a manner as possible, there is no need of breaking the arm if care is taken.

The arm which is to the rear is usually more easily liberated. To do this the operator seizes the legs with one hand and carries the child's body well upward. This will cause the posterior shoulder to be more readily reached, and will permit more room for the manipulations necessary. Two fingers of

Oak Grove Hospital

For Nervous and Mental Diseases.



Grounds comprise sixty acres of stately oaks and are picturesque and secluded. Buildings roomy, homelike, free from institutional features, and erected with especial reference to the care of nervous and mental invalids.

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